

DRIVE

AA

January-February 1979

the motoring magazine
that's so different

40p



DEEP '79 America
enters the
Four-Wheel War

DRUGS and driving
page 32

“Until I discovered SP Car Workshop Manuals I couldn't even change the points. Now I reckon to save about £100 a year. And enjoy it.”

BRIAN MORGAN, OSTERLEY, MIDDLESEX.



People all over Britain are finding that repairing, tuning and servicing their cars is a whole lot easier than they thought. They find it satisfying, save themselves the £6 an hour that a garage would charge, and do a really thorough, reliable job.

That's exactly what Brian Morgan found: a few hours a week on basic repairs and maintenance have saved him over £90 during these last eight months.

The reason is a really good car Workshop Manual, an SP Car Workshop Manual.

THE BOOKS — There's an SP Car Workshop Manual for more than 50 popular makes and more coming out all the time! Each one contains complete information on fault-finding, basic maintenance and changing components spelled out in large print, with hundreds of photographs, exploded parts illustrations and crystal-clear diagrams.

Every step of the way has been researched in SP's workshops where cars are dismantled and reassembled to check and re-check the accuracy of the instructions.

THE FEATURES Every part of your car is shown in the average 200 pages of your SP Manual — engine, cooling, fuel system, clutch, transmission, suspension, brakes, steering and lubrication. Fault finding and everyday maintenance are there too.

SP Car Workshop Manuals are available at bookshops, motor accessory shops and newsagents where you see the SP symbol.

Go and get one for your car. It'll give you satisfaction and save you money.



SP Manuals are produced by our own qualified technicians in our own workshops — we buy/hire the subject car, take it into our workshop, dismantle it and photograph the process, reassemble it and check the best procedure — our first hand experience and skill is then used to write the best step by step DIY method to be published in our manuals.

THESE CARS — AND MORE!

British Leyland
Allegro 1100/1300cc 1973-76
Allegro 1500/1750cc 1973-76
Marina 1.3, 1.8 1971-76
Maxi 1500/1750cc 1969-76
1800 Mk I & II 1964-72
Mini 850/1000/1100/1275cc 1959-71
Mini 850/1000/1100/1275cc 1971-76
1100 1962-68
1100/1300 1967-74
Princess 1800/1800 HL 1975-78
Datsun
120Y 1171/1288 1973-76

Ford
Capri Mk I 1600cc 1969-74
Capri Mk II 1300/1600/2000cc 1974
Cortina Mk I & II 1200/1300/1500/1600cc 1962-70
Cortina Mk III 1300/1600/2000cc 1970-76
Cortina Mk IV all models
Escort Mk I 1100/1300cc 1968-75
Escort Mk II 1100/1300/1600cc 1975 on
Fiesta 950/1100cc
Hillman
Avenger 1250/1300/1500/1600cc 1970-76
Hunter 1725cc 1967-70
Hunter/Sceptre 1500/1725cc 1970-76
Imp 1968-76
Honda
Civic (Auto) 1170cc 1973-77
Civic (Manual) 1170cc 1973-77

Renault
12 1289cc 1970-74
Toyota
Corolla 1100cc 1967-70
Skoda
S100, S110, 988, 1107cc 1970-77
Vauxhall
Chevette 1256cc 1975 on
Viva OHV 1159/1256cc 1970-76
Beetle Type 1 1200/1300/1500cc 1962-70
Golf 1100cc
Passat 1300/1500/1600cc

SP Car Workshop Manuals

Professional help at your elbow for only £3.75.

SP Car Workshop Manuals are published by: Murray Book Distributors Pty Ltd.,
International Publishers; Ludgate House, 107 Fleet Street, London EC4A 2AI.

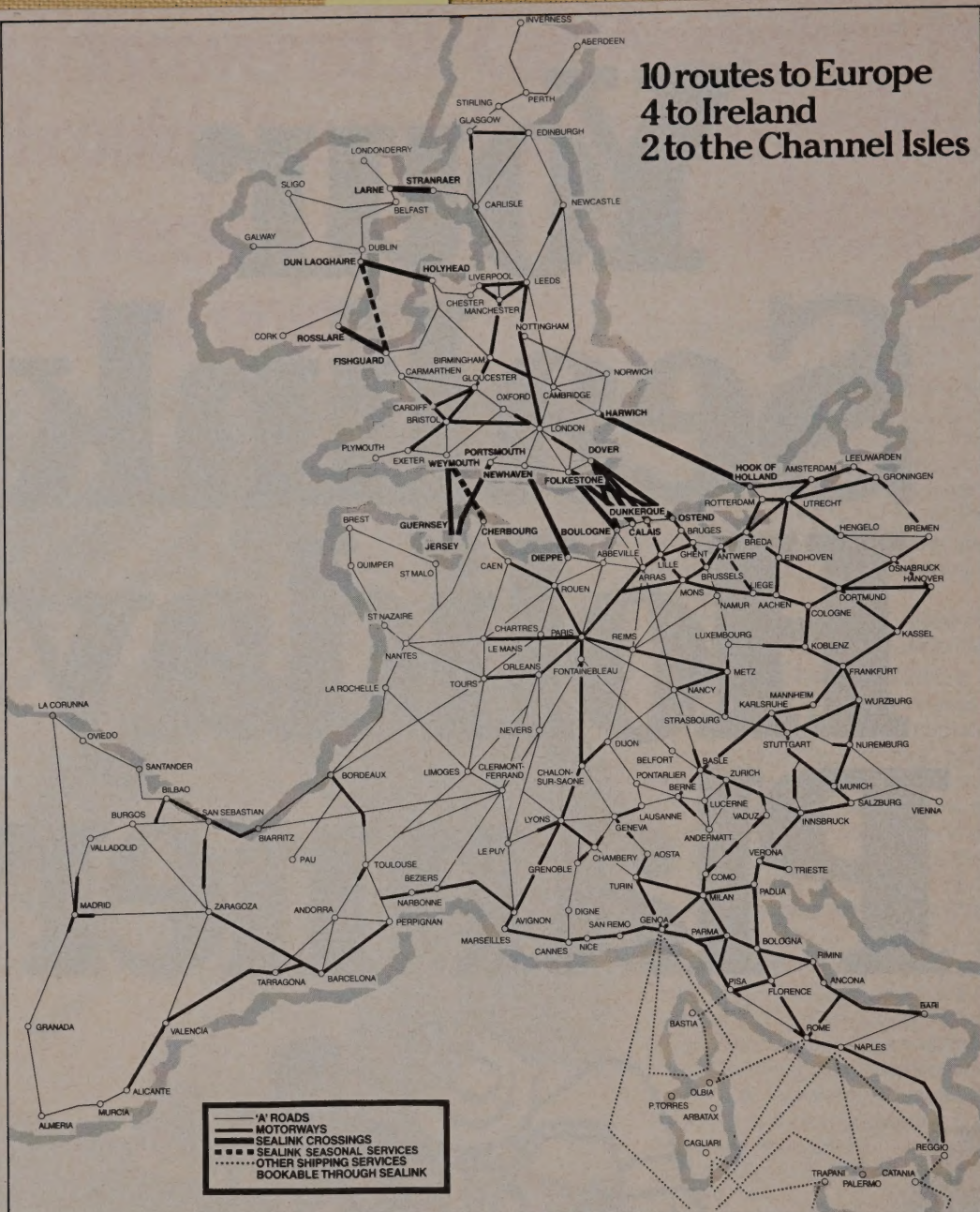


Your Sealink Holiday Planner



**A cut-out-and-keep guide
to help you make the most
of your motoring holiday
across the water.**

**10 routes to Europe
4 to Ireland
2 to the Channel Isles**



We fit your plan

The secret of a successful motoring holiday overseas is good planning and careful budgeting. This guide is designed to help you plan your timing, your route and your finances to suit you, wherever you're going in Europe or Ireland. There are also some bright ideas if you'd like a different kind of holiday this year.

Sealink has more routes and more sailings than any other ferryman, so there's a greater chance we have exactly the sailing you're looking for, night or day. In other words, we fit your plan, rather than you fitting ours. In many cases, you can go out by one route and back by another without paying extra.

The typical family upon which we've based our price examples comprises mum, dad and two children aged 4-14 (aged 3 but under 14 in the case of Ireland).

They travel in a standard saloon, such as a Ford Capri or Austin Maxi and unless otherwise stated they pay Summer Season fares. These fares are available to travellers to Europe from Sundays to Thursdays inclusive from July 2nd to September 2nd, and they are appreciably cheaper than Summer Weekend fares. So if you can organise your crossing in this mid-week period, you'll be doing your holiday budget a big favour. Ireland, too, has a big selection of reduced fares in off-peak periods.

There are, of course, lots of other ways to save money with Sealink—excursions and inclusive holidays all carry big reductions, and apply to all routes.

If you use the form at the end of this advertisement, it'll help your Sealink Travel Agent to help you save money.

HOLLAND



Sail from Harwich Parkeston Quay to the Hook of Holland. From there the E8 motorway goes to the Hague and Amsterdam, the E36 to Rotterdam and on into Germany.

4 big, comfortable ships, including the "Prinses Beatrix" which only entered service last year, operate this route, making 1 sailing by day (about 6½ hours crossing time) and 1 by night (about 8 hours) in both directions. There's an extra day sailing both ways from June 23rd to August 27th. Cabins are available, at an extra cost.

Departure times

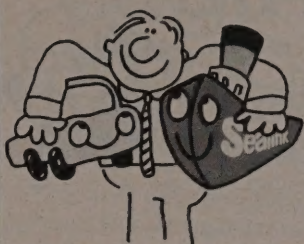
Departures during the Summer Season are from Harwich Parkeston Quay at 10.15, 11.30 and 22.00 hours.

Typical family return fare (2nd Class)

(Sun-Thurs) Summer Season Tariff

Adults + car	£94.20
Children	£24.00
Total	£118.20

BELGIUM



From Dover and Folkestone there's a round-the-clock service to Ostend with up to 15 sailings every day in peak season. At Ostend the N10 goes direct to Bruges and Ghent, the E5 to Brussels and Central Germany, and the N63 to Lille, Northern France and Luxembourg.

The crossing time from Dover is about 3½ hours, from Folkestone 4 hours. The "Prince Albert", brand new, was introduced to this route last year.

Departure times

During the Summer there are up to 15 sailings each day, so there's a good chance we have exactly the one you're looking for.

Typical family return fare

(Sun-Thurs) Summer Season Tariff

Adults + car	£77.60
Children	£17.20
Total	£94.80

FRANCE



SHORT CROSSINGS

From both Dover and Folkestone you can sail to Calais and Boulogne. You can also sail to Dunkirk West from Dover. From Calais and Boulogne take the N1 to Paris and then on to the South of France, and the N43 to Brussels and Northern France.

Dunkirk West is linked to the A25 motorway for all parts of Europe. Crossing times are from around 90 minutes to 2¼ hours.

Departure times

At peak times there are up to 29 sailings every day on the short crossings, which means you can go virtually any hour of the day or night.

Typical family return fare

(Sun-Thurs) Summer Season Tariff

Adults + car	£77.60
Children	£17.20
Total	£94.80

4-HOUR CROSSINGS

The longer crossings from Newhaven to Dieppe, and further west, from Weymouth to Cherbourg. The N27 from Dieppe gives you the fastest motoring route to Paris. From Cherbourg the D2 is an excellent route for a tour of Brittany and into provincial France. It's also a major route to Bordeaux and thence, Spain. Both are excellent routes for smooth, scenic motoring.

Departure times

During the peak Summer Season sailing times from Newhaven are 01.00, 06.45, 10.00, 13.00, 19.00 and 22.00. From Weymouth sailings are at 10.00 and 22.00.

Typical family return fares (Newhaven to Dieppe)

(Sun-Thurs) Summer Season Tariff

Adults + car	£89.20
Children	£22.40
Total	£111.60

PRICES

All the prices and sailings to Europe in this advertisement are accurate at the time of going to press, and are based on 3 travelling periods.

The Standard Season Tariff is the cheapest and is available outside the main Summer Season. The Summer Season Tariff (on which our fare examples are based) is available Mondays to Thursdays throughout the Summer, and the Summer Weekend Tariff, the most expensive, on Fridays and Saturdays during the Summer.

The dates for the Seasonal Tariffs are:

Standard Season

January 1st to July 1st and September 3rd to December 31st.

Summer Season

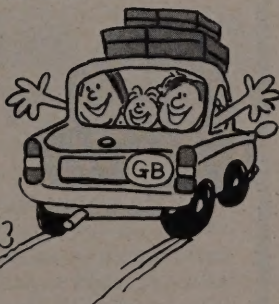
Mondays to Thursdays July 2nd to September 2nd, also Fridays and Saturdays, July 6th, 7th, August 31st and September 1st.

Summer Weekend

Fridays and Saturdays July 13th to August 25th.

MOTORING MONEY SAVERS TO EUROPE

There are many excursion tickets which can save you big percentages on the Standard Season fares.



24-hour excursions

Up to 24 hours on the Continent for a lovely day out, shopping and sight-seeing in the Channel ports and surrounding countryside. This ticket saves you 50% of the full tariff.

Typical family fare incl. car

Folkestone-Boulogne

£43.80 Standard Season
£47.40 Summer Season

60-hour excursions A welcome break from routine and top-up to your annual holidays. Up to 60 hours on the Continent. This ticket saves you about 35% of the full tariff.

Typical family fare incl. car

Belgium and France
(Dover-Boulogne/Calais)

£63.00 Standard Season
£67.70 Summer Season

5-day excursions With up to 5 whole days on the Continent, an invigorating get-away-from-it-all, and ideal for a second holiday early or late in the year. This ticket saves you about 20% of the full tariff.

Typical family fare incl. car

Holland £93.20 Standard Season: £99.40 Summer Season.
Belgium £73.60 Standard Season: £79.40 Summer Season.
France (Newhaven-Dieppe) £88.00 Standard Season: £94.00 Summer Season.

2-day excursion tickets to Holland

The beauty of this ticket is that it allows you 2 full days to sample the delights of historic towns, cities and colourful landscapes. You'll save up to 35% or more of the full tariff.

Typical family fare incl. car

£80.20 Standard Season: £85.30 Summer Season.

5-day Winter Excursion at 50% of the full tariff

Available by all Sealink European routes (all sailings EXCEPT Harwich-Hook of Holland night sailing) until March 31, 1979.

NB: Please make sure you understand the time limits attached to excursion tickets. If you over-stay the limit of your ticket we must charge extra.

Caravans half-price On selected sailings on all European Services, caravans can go at half-price, a saving of up to £26. We also have our Sealink touring caravan hire service in Europe and Ireland and sited caravans for hire, too. See your Sealink Travel Agent for details.

IRELAND



Sealink operates the 3 shortest sea routes to the Republic of Ireland. Our Holyhead to Dun Laoghaire and Fishguard to Rosslare services are both 3½-hour crossings. Our Stranraer to Larne route is only a 2¼-hour crossing and is the popular link to Northern Ireland.

Crossing to the Republic of Ireland, you may, if you wish, take one route going out, and another returning without paying any extra. At Dun Laoghaire you can take the T44 to Dublin, and the T5 across country towards Galway. Rosslare is a starting point, via the N25 to Waterford, Cork and the South West, and thence the breathtaking scenery of the Ring of Kerry.

There are 2 sailings each day from Holyhead throughout the year. An additional route, Fishguard to Dun Laoghaire operates during the Summer only and takes about 5½ hours. Fares and charges are the same as for Second Class travel on the other two routes to the Republic of Ireland.

Ireland is a super place for family holidays and the only place in Europe where even Rover the dog is a welcome holiday guest. Why not take him along and save yourself a small fortune in kennel fees?

Typical family return fare (2nd Class)

Summer Weekend

Car	£64.00
Adults	£38.00
Children	£19.00
Total	£121.00

MOTORING MONEY SAVERS TO IRELAND

Monthly Return Tickets

A Monthly Return ticket saves you 50% of the peak season cost for your car and any other towed vehicle, such as a trailer or caravan. This ticket is available outward before June 28th and after August 28th.

Typical family fare

Car	£32.00
Adults	£38.00
Children	£4.00
Total	£74.00

Please note: Monthly Return Tickets also save you 50% of the peak season cost for any towed vehicles. These are charged separately, at a single rate for the return journey.

10-day Return Tickets (Not available outward from June 29th–September 9th nor at Easter and Christmas periods.)

Another off-peak ticket. This basic price is £76 (2nd class) regardless of the length of your car. That price covers 4 adult fares, so if 4 adults travel, the car is going free. 2 children, aged 3 but under 14, count as 1 adult. You can still save money on this ticket even if your car does not have 4 adult passengers.

3-day Return Tickets (Valid outward up to April 6th and from September 28th to December 14th.)

The basic price is a maximum £38, and covers 2 adults and any car. 2 children, 3 but under 14, count as 1 adult. Additional adult max. £19 extra, additional child max. £2 extra.

Kids for a quid (On all dates except Fridays–Mondays from July 28th to August 27th.)

At off-peak times, children aged 3 but under 14 who are car passengers can travel for only £1 each way (Second or One class).

NB:

Please make sure you understand the time limits attached to bargain tickets. If you overstay the limit of your ticket we must charge extra.

INCLUSIVE HOLIDAYS THROUGH SEALINK TRAVEL LTD.

(Accommodation and crossing for car and passengers included in the prices).

FRANCE, "LES VACANCES VERTES"

In conjunction with the French Travel Service, Sealink Travel Ltd offers a wide-ranging series of holidays in rural France. They are called 'Vacances Vertes': some are full board, some self-catering. You'll find the prices, which include the ferry crossings, very reasonable.

All the details are in this Sealink Vacances Vertes colour brochure from your Sealink Travel Agent.

But just to whet your appetite, here's an example of Vacances Vertes:

Holidays in 'Gites' (self-catering)

Gîtes are French country cottages, houses or flats in villages and hamlets. You rent the Gîte Rural, as it's called, and take part in the country life just like the local people. If you love rural France, you'll love Gîtes. Our typical family price starts at £180 for 2 weeks, including the car fare.

MOTORING HOLIDAYS '79

If the idea of an 'organised' holiday doesn't appeal to you, Sealink has the answer. A whole series of motoring freedom holidays on the Continent, in Ireland and the Channel Isles. You can choose from this exciting selection:

A self-catering holiday in France, Germany, Austria or Switzerland. In a few words, a 'Swiss chalet' style holiday.

A self-catering bungalow holiday in Belgium at the point where the Netherlands, Belgium and Germany meet.

A sited caravan holiday in the Dordogne or the Loire Valley.

Plus lots of caravan and camping opportunities on the Continent and in the Republic of Ireland.

See your Sealink Travel Agent for more details of Motoring Holidays '79.

IRELAND '79

Again you book the whole holiday through Sealink. You have a big range of free-and-easy holidays to choose from, so you can explore Ireland to your heart's content in whatever way suits you.

The accommodation consists of cottages, farmhouses, sited caravans, small comfortable hotels and guest houses, and the price you pay includes your ferry crossings and accommodation. An Irish welcome is a sincere and warm one, and you'll feel at home so quickly it will be a wrench to leave when your holiday ends. There is also a wide variety of self-catering holidays to choose from.

The sporting enthusiast, too, has lots of scope. Fishing, riding and golfing can be enjoyed from self-catering chalets, luxury hotels, caravans, delightful country farmhouses and even holidays afloat. And as you'd expect the scenery is delightful.

Full details of Irish holidays are in the Sealink Irish Holiday brochure. Get one from your Sealink Travel Agent.

If you'd like to improve your golf, why not take part in the Dai Rees Golf Clinics? There are 5 of these throughout the year.

SEALINK CARAVAN HIRE

If you're going to the Continent you can hire a United British Caravan through Sealink at Ostend and at Montreuil near Boulogne. If you're bound for Ireland you can hire a Young's Caravan from Dublin or Wexford. The caravans are in excellent condition and from 4 to 6-berth. We'll give you plenty of instructions as to how to prepare your car, and some useful tips, too.



Details from the Sealink Car Ferry Brochure. Ask your Travel Agent for a copy.

Price example Ireland. (Includes a return crossing for typical family and car any length.)

A 12-foot 4-berth caravan, two weeks in June, £148.

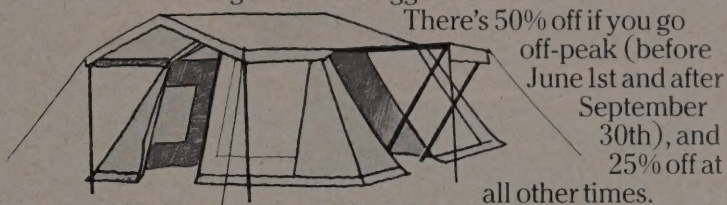
Price example Europe. (Includes return crossing for typical family and car any length.)

12' 3" Caravan, 4-berths, two weeks in July, £221.20

SEALINK CAMPING HIRE

Up to 50% discount through Blacks Camping and Leisure.

This year your camping holiday will be even cheaper than last year. Blacks have frozen their hire prices for 1979 and all Sealink customers get an even bigger discount.



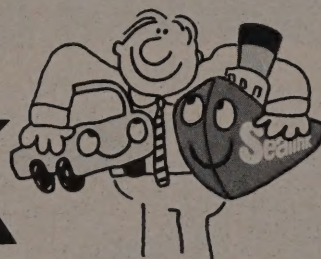
There's 50% off if you go off-peak (before June 1st and after September 30th), and 25% off at all other times.

For example during the low season a Safari 4-berth frame tent costs only £8.75 for 7 days, a saving of £8.75 on the normal rate. Additional days are £1.25 each. Packed weight, 70lb.

Full details are in the Sealink Car Ferry Brochure.

You and your car and

Sealink



It's a better way to get away

SEALINK HOLIDAY PLANNING FORM

Once you've got some idea what you're planning to do this year, fill in this form (as far as you can) and take it to your nearest Sealink Travel Agent, Principal BR stations, BR Travel Centre, or motoring organisation. There you'll get advice on the best way to do what you want to do, plus your copies of all the relevant colour Brochures, including the Car Ferry Brochure.

Your destination abroad

Your Sealink route

Time of day you wish to sail (e.g. am/pm)

Date of sailing

Length of holiday abroad

Type of holiday being considered

Vehicle and Passenger Details

No. of passengers adults children 4-14 years*

*3-14 in the case of Ireland

Make of car length reg. no.

Any towed vehicle
e.g. caravan, boat trailer, baggage trailer.

Your name

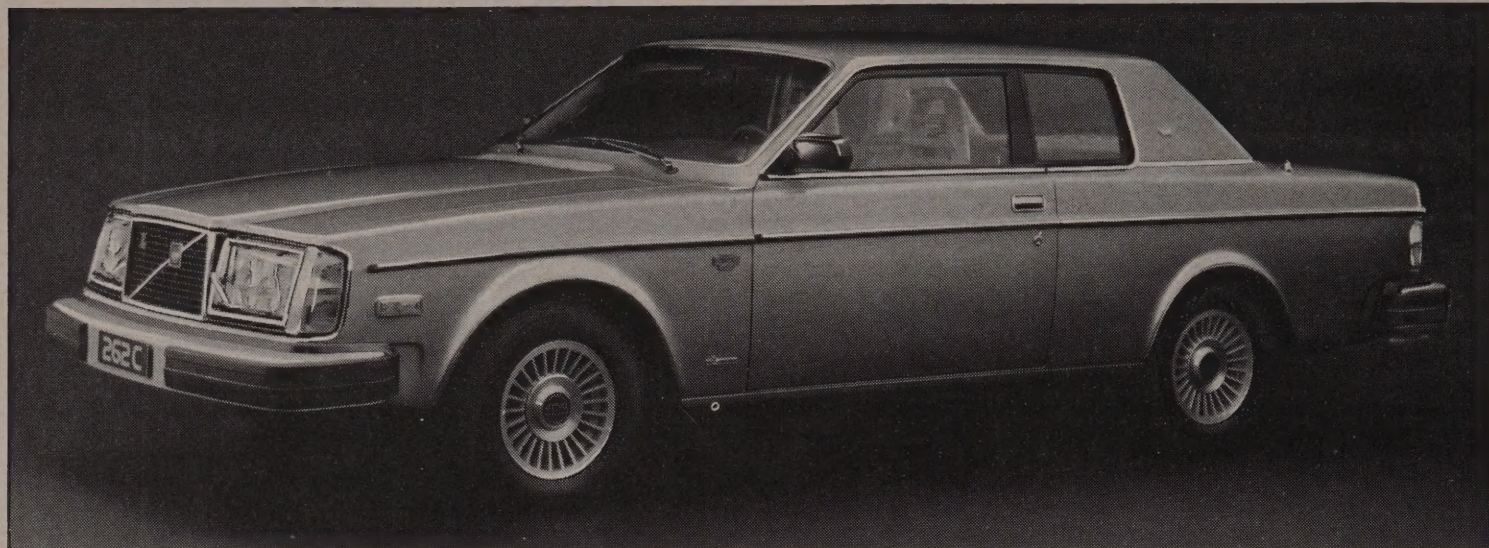
Address

You and your car and

Sealink

It's a better way to get away

They both make a big new safety claim.



And you can see right through it.

The Volvo 262C is a sleek coupé version of one of the world's most admired safety cars.

The Triumph Dolomite range offers the complete spectrum of motoring, from quiet luxury to a lively sports performance.

And both cars now fit Triplex Ten Twenty Super Laminated windscreens as standard: both now carry the world's most advanced safety windscreen.

A windscreen that reduces facial lacerations on head impact by an average of 99%.


A windscreen that won't turn opaque if a stone hits it. A windscreen that helps to retain driver and passengers inside the car in case of a severe collision.

Triplex Ten Twenty is already standard on the Rover range, The Princess 2 and the Rolls-Royce Camargue.

From all of us to Volvo and Triumph: welcome to the club.

Triplex
10 XXX 20
SUPER LAMINATED

Triplex Safety Glass Co. Ltd., Eckersall Road, Kings Norton, Birmingham B38 8SR. (021-458 2031, Telex 338097).

Triplex Safety Glass Co Ltd is a  member of the Pilkington Group

DRIVE

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ABC Member of the Audit Bureau of Circulations

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Monitor



Travelling hopelessly

Motorists lulled into believing that they will not pay any extra as a result of the road-fund licence being abolished in favour of duty on petrol could be in for a shock. For the break-even point—the annual mileage that the average car will be able to travel without the motorist paying more tax than the present £50—is likely to be as low as 6000 miles a year, not the 7500 that government claims; and a Petroleum Retailers Association spokesman confirms that the new system will increase costs to garages and filling stations, and that these will have to be passed on to customers.

How much more, on top of the 20p-a-gallon tax scheduled for the year 1983?

It could be another 5p, for garages will be obliged to charge an extra 1p a gallon to cover credit and depreciation on hardware (such as pump replacements); 0.2p for petrol loss through evaporation; and 1p for increased security and insurance premiums because of the additional money that will be held on garage premises.

Add these on to the 20p-a-gallon tax, and at once customers will be paying 22.2p. And will then have to meet VAT on this amount—2.7p, making a total of 25p more a gallon.

Just the Jobs

A fish-and-chip shop isn't the sort of place you'd expect to meet a motoring Good Samaritan, but that is where Jack Hartwell, 48,

and his wife Maureen, of Basingstoke, Hampshire, found their Caring Motorist—the sixth and last in DRIVE's year-long list.

The Hartwells and their three young daughters were on a visit to relatives in Scarborough, last Easter, when, half a mile from an M1 service station at which they'd filled up, clouds of smoke billowed from their 1964 Hillman Minx.

Coasting down a hill off the motorway, the five tired and hungry people spotted a fish-and-chip shop—open.

'There were two nurses in the fish-shop queue,' says Maureen, 42, and, when we asked about boarding houses, one of them said that, if we could go to her hospital, she would ask the sister for time off to take us to a place she knew. So all five of us squeezed into her car, clutching packets of fish and chips, and off we went.'

In the end, Nurse Evie Job took them to her own home in Bradgate, Rotherham: 'They looked desperate, and I just couldn't abandon them.'

The Hartwells remained the Jobs' guests over the entire Easter weekend. 'While Evie's husband Eddie, 68, worked on the car with Jack, Evie and her daughter cooked and cared for us,' says Maureen. 'They even took us to local beauty spots to give the girls a treat.'

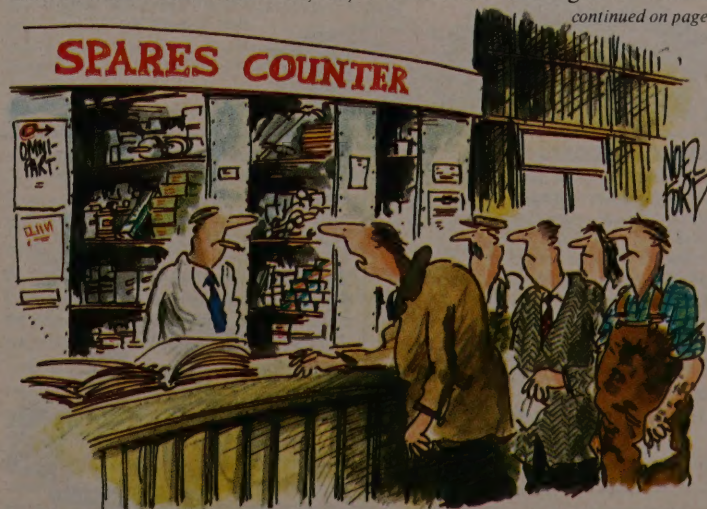
'They wouldn't take a penny



for food or fuel. I think they deserve a medal—but I'll settle for DRIVE's prize for them of 10 years' free AA membership.'

And that's just what the Jobs get; while Jack and Maureen win their choice of £10-worth of goods from the AA's current mail-order catalogue for nomin-

continued on page 11



'Well, it wasn't obsolete when I started queuing!'

multi-storey carparks, and make them places most of us choose to avoid (page 13). And put a few shots across the bows of motor manufacturers who supply useless, cut-price toolkits with their costly new cars (page 54).

All this, plus the start of a regular programme of motorcycle tests (page 50); the latest from the Long Term Test Club, where a Triumph TR7 checks in for 12-month scrutiny (page 24); tests of the Jeep Cherokee S (d'you like our cover girl?), Subaru 4wd and Range Rover (page 16), and Citroen Dyane, Skoda Estelle and Fiat 126 de Ville (page 40); a Special Offer that evidences our very real concern for the in-car safety of youngsters (page 58); and, of course, all our regular departments, from the useful Index of Motoring Costs (page 39) to the Used-car Price Guide (page 63).

It's our way of welcoming you to Motoring 79, and wishing you all the best that it has to offer. You can return the greeting by staying with us throughout the year—and do yourself a favour by taking a regular subscription (page 47).

— the Editor

IS IT corny for an editor to wish his readers a Happy New Year? It used always to happen; but these days we've become—well, a trifle more sophisticated. Or is it simply uninvolved with people...?

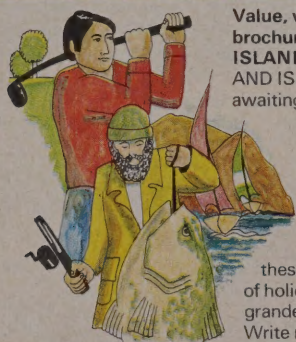
Anyway, good wishes to you from all of us at DRIVE. Good wishes for an enjoyable and, above all, a safe motoring new year. A year when, despite the escalating costs, you find new joy in your car... and when perhaps, for all our sakes, the politicians demonstrate their involvement with people and *do something positive* about seatbelts and drink-driving.

A vain hope? We shall have to wait and see. Just as we have waited, and waited, and waited these past several years, as successive governments have done little more than mouth platitudes and slap up gruesome road-safety posters on the twin principal hazards of our motorised society.

More immediately, in this first issue of 1979, we once again highlight the dangers to driving in everyday drugs and medication (as we first did back in January 1969, since when little, again, has been done to safeguard us all). See page 32 for the latest information.

We illustrate also the miserable conditions that prevail in many

DRIVE DIRECTORY HOLIDAY IDEAS FOR



Value, variety and information—all in two free brochures from Scotland's **HIGHLANDS AND ISLANDS**. Area by area, 'THE SCOTTISH HIGHLANDS AND ISLANDS' points out the beauty and contrasts awaiting you. Towering hills, deep glens, calm lochs, wild moors, busy towns, welcoming villages. Also information on sights, routes, events. Then 'HOLIDAY IDEAS '79' offers any number of holidays, short and long, active and relaxed—for golfers, anglers, tourists, riders, gliders, yachtsmen, families, loners—the list of recreations and resorts is magnificent. Together, these free brochures provide an unbeatable choice of holidays and activities—all set in the spectacular grandeur of the **HIGHLANDS AND ISLANDS**. Write now to **HIGHLANDS AND ISLANDS**, 54 High Street, Grantown-on-Spey, Scotland. **Coupon No. 1.**

North? South? Or both? Camping? Caravanning? You choose. We welcome you. **Tour the Yorkshire Coast and the Isle of Wight with UPTONSPUR.**

Fine touring sites are yours to visit at Scarborough and Whitby. See the fine scenery of the Yorkshire Wolds. The splendour of the Dales. Walk the North Sea cliffs. Laze on the beaches.

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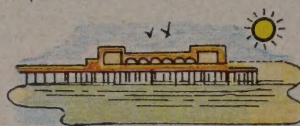
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Fancy a long weekend break in winter or spring? If so, take advantage of special reductions in **SWING SOUTH**, the Board's free publication. 100 hotel 'bargain breaks' at Bournemouth, the New Forest, rural Hampshire and Dorset or the Isle of Wight. From £10 for two nights per person including breakfast, VAT and service. **Coupon No. 8B.**

HOLIDAY IDEAS FOR 1979

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lists many companies offering special coach tours. Fill in coupon **No. 11** and send 20p (see Money Form) for the brochure that tells you all you need to know for a great holiday on the North West Coast.

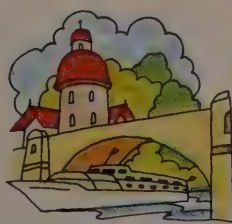


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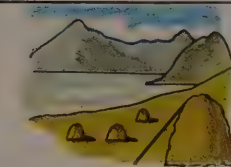
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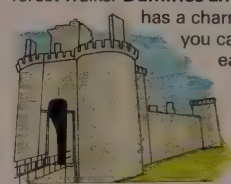


Over the sea to Skye...

For peace and relaxation visit Skye, 'the gem of the Western

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The publishers of this magazine have given to the Director General of Fair Trading an undertaking to refund moneys sent by readers in response to mail order advertisements* placed by mail order traders who fail to supply goods or refund the money and who have become the subject of liquidation or bankruptcy proceedings. These refunds are made voluntarily and this arrangement does not apply to any failure to supply goods advertised in a catalogue or direct mail solicitation.

If a mail order trader fails, readers are advised to lodge a claim with this magazine within 3 months from the date of the appearance of the advertisement. Claims received after 3 months will be considered at the discretion of the publishers.

*For the purpose of this Scheme, mail order advertising is defined as: 'Direct response advertisements, display or postal bargains where cash has to be sent in advance of goods being received'.

HOLIDAY IDEAS FOR 1979

Drive Directory Coupons

It costs you absolutely nothing to obtain further information on the items in Drive Directory. All you have to do is quote the brochure numbers (these are in **bold type** at the end of each Directory) in the appropriate box on the coupon below. Then **PRINT** your name and address and cut out the number of coupons you require and put them in a sealed envelope. It requires **NO STAMP** because **Drive is paying the postage** for you. Send the envelope with enclosures to this address: **Drive Directory, FREEPOST, Basingstoke, Hants, RG21 2EA.** Valid until 30/6/79.

Please ensure each coupon is fully completed for each brochure requested. Complete money form for brochures numbered 6, 8A, 8B, 9 and 11.

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If you've asked for brochures costing money, write their numbers and prices here and enclose cheque/Postal Order made out to Drive Directory for the total amount.

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Quote Price

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ating the Jobs. What, exactly, was wrong with the Hartwells' car? It had been filled with *diesel*, not petrol, at that last motorway service station.

And that brings to a close DRIVE's Caring Motorist competition, launched in our tenth-anniversary issue in May 1977 to find six selfless drivers who used their cars to help others. The response was tremendous, with scores of entries, many from old folk wanting to thank friends and neighbours for regular lifts to shops, doctors, hospitals, or just for runs in the country.

The judges' task was never easy; the other five winners—each of whom has received 10 years' AA membership—were: the neighbour who looked after a woman's car while her husband was in hospital; the chap who rescued a honeymoon couple who had broken down; a man who accompanied an L-driver for months to give her the confidence to pass her test; the arthritic motorist who collected elderly and disabled friends from their homes for shopping expeditions; and the man who drove a crash-victim 20 miles to hospital.

Our congratulations to all of them—and our thanks.

Baader or worse?

Red faces at the London HQ of the Motor Agents Association, following a less-than-charitable statement released in the wake of the arrest of 'motor mechanic' and Baader Meinhof-gang member Astrid Pröll.

Within 72 hours of a swoop by armed detectives on the premises of the North London Vehicle Repair Workshop, where Ms Pröll was employed to instruct unemployed school-leavers in basic mechanics, the MAA was referring to the workshop as the 'sole survivor of the ill-conceived community-group attempts of 1977 to compete with professional garage managements in garage-skill training'. The MAA couldn't understand how Ms Pröll came to be employed as 'it seems fair to assume that routine checks and enquiries would have cast doubts on her status as a fully experienced worker in possession of the appropriate City and Guilds certificate'; and it was 'patently absurd' to pay her a 'salary in the range of £4000-£4500 when considered against the wage levels of mechanics in the industry'.

The MAA concluded it 'now believes that this entire episode [the arrest of Astrid Pröll] well illustrates the value of its approach to the Manpower Services Commission last year in ensuring that garage-skill/training remains where it should stay—with the professionals.' This approach led to an agreement, claims the MAA, with the

government-backed MSC to 'control the proliferation of garage-training projects mounted by well-meaning but inexperienced community groups'.

The red faces? Well it appears that, among the members of the management committee of the workshop—established in 1977 as an employment project and funded under the MSC's job-creation programme to the tune of some £42,000—are four London garages: Henlys, Shaw and Kilburn, R E King, of Belsize Lane, and Salvage and Wyatt, of Kentish Town.

The four garages, all of whom are members of the MAA, have always taken an active interest in the running of the workshop. In fact, two representatives of Henlys were on the management panel that interviewed Ms Pröll (known then as Anna Puttick).

Workshop's secretary, David Martin, tells DRIVE: 'Her qualifications for the job, apart from her obvious interest in the project, were a certificate in City and Guilds, Part 1, in vehicle repair, and a certificate from the Training Opportunities Programme course on the same subject; she was also taking a course in welding. In addition we received an exemplary reference from a past employer, who was a mechanic.'

'The details of her employment were straightforward—she had a P45 and a National Insurance number. We needed her as a third-string in our trio of instructors. The other two each had 15-20 years' experience in all aspects of vehicle-repair and maintenance, and we needed her to teach lads the basics.'

The MAA now tells DRIVE that the matter is 'over and done with', though the wage paid to Ms Pröll was 'way below' that which a qualified mechanic employed by a garage could command.

Popularity Pole?

Teach the natives to shoot straight, and they might just end up shooting you! It's a thought that must cross Fiat's mind as it views the introduction of the Polonez.

Fiat was surely pleased to find a profitable outlet for its outdated models when it got into deals with the Soviets (Lada) and the Poles (Polski-Fiat) in 1970 and 1967. True, a few might trickle back into EEC countries, but...

The Poles had other ideas, however, and, using that Western trick known in the business as a 're-skin', they have pitched into the Western market-place with a thoroughly modern bodyshape, without having to spend millions on new running gear.

The result is the Polonez (pictured above), with appeal to the trend-following European buyer.

The Warsaw car-builders have decided that the Polonez can sell



on its merits rather than its price but at £3000 it is hardly expensive. Performance from the 1481cc overhead-valve, four-cylinder engine is claimed to be competitive, with a maximum speed of around 90mph and fuel consumption of 25-26mpg overall.

Britain has been earmarked as a main sales-target.

Pounds and pounds

The many dozens of motorists who complain to the AA's legal services each year about vehicles being towed off London streets and into the pounds of the Metropolitan Police cannot be too pleased by the news that the fine for retrieving an impounded car has gone up from £20 to £22.

In fact, many of the complaints received by the AA are unjustified. If you park on a double yellow line, clearly you run the risk of having your vehicle removed. But, those who are not regular visitors to London can often make an innocent mistake, such as putting a coin in the wrong side of a double-headed meter, or parking in a street without restrictions but nevertheless causing an obstruction.

One AA member, urgently needing to respond to a call of nature and unable to find a meter, parked on a single yellow line just off Leicester Square, outside a public convenience. He was gone for two minutes—a fact confirmed on the ticket—but the car was nevertheless removed and it cost him £20 to get it back.

Scotland Yard tells DRIVE that 49,944 vehicles were towed away in the Metropolitan Police area in 1977, and motorists paid nearly £1 million to retrieve them. An additional £4,627,996 was paid in fixed-penalty fines.

This makes a total revenue of nearly £5.5million. Yet the Department of Transport, which authorised the latest £2 increase maintains that the towing-away operation is run at a loss. The new fines are not a deterrent, it insists, but 'a modest increase' to prevent a deficit.

The Transport department adds, ironically, that the proliferation of anti-theft devices is contributing to the rising cost of removal. Says a spokesman: 'The

police are unable in such cases simply to drive the car away. They have to lift it on to a transporter, and obviously this involves more people and other vehicles.'

Ahhh...

All right, Yak?

Manchester Garages Ltd sold around £10million-worth of Fords in 1978, but this year one of its vehicles in particular will be the centre of attraction for buyers world-wide. Called the Yak, it's a bit like a Jeep, and has some off-road capability thanks to a differential-lock that, Manchester Garages claims will allow it to go anywhere a Land-Rover can.

At the moment, the Yak is still in the prototype stage and some changes are likely, but the testers are happy with the trusty mechanicals of the Ford Escort.

The project is being backed by the National Research Development Corporation to the tune of about £110,000; Manchester Garages hopes to build up to 500 in 1979 and sees the vehicles—priced at about £3200—going mainly to developing countries.

Seal of Approval

Monte Carlo and Grand Prix sheepskin car seatcovers have been awarded an AA Seal of Approval; the Braidlok towrope will also be known as Rollorope; and the Seal of Approval has lapsed on the Cartrend GT One-piece Headrest.

Road-number changes

Important changes in the Chelmsford/Harlow/Bishop's Stortford area include: Bishop's Stortford-Harlow now A1184; Harlow-M11 junction 7 now A414; M11 junction 7-Theydon Bois now B1393; A414 Chelmsford-Hatfield Heath now A1060 (from Hatfield Heath-north of Harlow now un-numbered); and A122 Chelmsford-M11 junction 7 now A414. AA members should refer to the *Handbook* atlas, page 19.

Roads information

Numbers in parentheses refer to maps in the 1978-1979 AA *Members' Handbook*.

BRITAIN

Motorways open M180, Thorne-Belton (A161), 7½ miles (34).

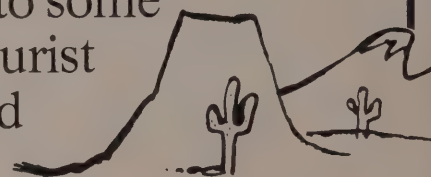
Major roads open A36, Whaddon and Alderbury bypass, 1.4 miles (8); A776, East Kilbride Expressway, 1.7 miles (48).

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ARGOSY

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The bad, the worse and the ugly

'JUST WATCH the look of panic on their faces,' said the carpark superintendent, as the queue stretching nearly 200 yards crept slowly into the multi-storey like a doomed ghost train. Certainly, the ramps were typically daunting, causing chaos and near-collisions, while blind-corners and two-way traffic on steep inclines demanded skill beyond some drivers...

Most covered car parks are cheerless places, with low headroom making the atmosphere oppressive. With underground parks, there is the additional claustrophobic effect from the proximity of the concrete walls: and even if they are properly ventilated, underground parks always seem to be airless and smelly.

Neither type offers protection from the careless parker, the vandal or the thief: if your car is damaged or stolen, you are unlikely to be compensated by the carpark owner, unless it is clear that its staff has been negligent—a task that is so difficult to prove that few victims even try.

National Car Parks, the giant that, in 30 years, has acquired the lion's share of the country's car parks, confirms that fewer than one customer a week complains about crime. The most-frequent complaints are about staff rudeness and small-change cheating at the check-out.

NCP admits that security at its 250 or so under-cover parks in this country—more than 100 in the London area—could be improved... but only at a price that motorists would not be prepared to pay. It would need an army of security men and probably closed-circuit television, too. Such a move, says NCP candidly, isn't going to happen: 'Anyway, if you leave your car in the street, you run just as much risk of having it stolen or things taken from it,' says a spokesman.

Lack of security was a major criticism by

carpark users questioned by DRIVE in straw polls at multi-storeys throughout Britain recently, but they also complained about delays, particularly on busy shopping days, in parking and collecting vehicles from town-centre sites; difficulties in manoeuvring cars through narrow, confined spaces and ramps; and niggling 'nasties' such as dripping water from higher levels that stains car paintwork.

Most motorists preferred open-air surface parks, with some even braving the peril of the traffic warden rather than face the rigours of queueing for a place in a multi-storey. Regular multi-storey users were generally those who had no choice anyway, and many were only too aware of the dangers of vandalism and mugging. Few had a good word to say about the outside appearance of purpose-built car parks, with their barrack-like façades.

Cash, of course, is a big complaint in the car parks debate: when it costs so much to keep a vehicle moving, it hurts to spend more to leave it standing still. At the carpark in Whitcomb Street, off Leicester Square, London—a multi-storey tomb that's almost always full of season-ticket holders by day and theatre-goers by night—the tariff is £2.75 for 12 hours, though you can have an extra 12 hours for just 10p.

But it's short-term parkers who can be heavily penalised. Regular carpark users will tell of the checkout clerk who leaves his barrier resolutely down while he is absent from his post. And the frustrated motorist, having suffered in claustrophobic conditions for fruitless minutes, can find that he is charged 60p extra for overstaying his 'welcome'.

Recently, at an NCP park in Liverpool, a queue of fuming motorists was held up for more than an hour when the barrier mechanism went wrong. Despite protests,

the attendant refused to let them pass until the extra hour had been paid for.

Later, NCP relented and agreed that, in future, if equipment failed, the barrier would be removed altogether and customers allowed to leave without further charge. 'This will apply all over the country,' a spokesman promised.

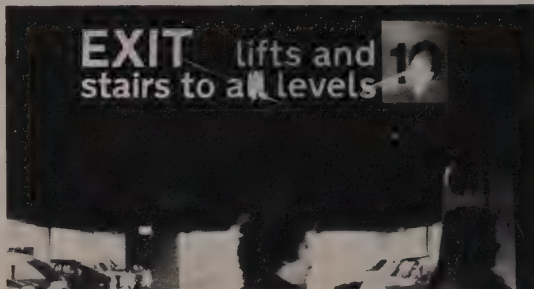
Of course, there is another option to queueing to get in and out of the catacombs: you can resort to mechanicals. Just drive into a multi-storey's reception area, park your car on a giant 'tea-tray', and leave it all up to a computer that will issue instructions to an automatic lift that can stack and recover vehicles in only three minutes, and with far greater precision than a mere human. The driver doesn't even have to set foot inside the gloom.

It sounds fine in theory, but an early version at Houndsditch, in south London, has turned out to be an enormous waste of space in the heart of a vital commercial area, with motorists reluctant to entrust their machines to machinery. The carpark, designed to accommodate 440 vehicles, now holds only 140—below ground level and on the forecourt.

Depressingly, the nature of Britain's car parks is unlikely to change for years yet—and even attempts to brighten up the existing buildings with markets, skateboard parks and even simple vending machines are quickly thwarted by vandals. Multi-storey car parks remain just what they always have been—places to get away from as fast as possible, an alien world of dark corners, wheel-spinning turns, engine-stalling climbs, narrow corridors, danger-filled stairways... in short, buildings that seem designed specifically to be unsuited to cars and people.

It's a picture that DRIVE's photographers have captured overpage.

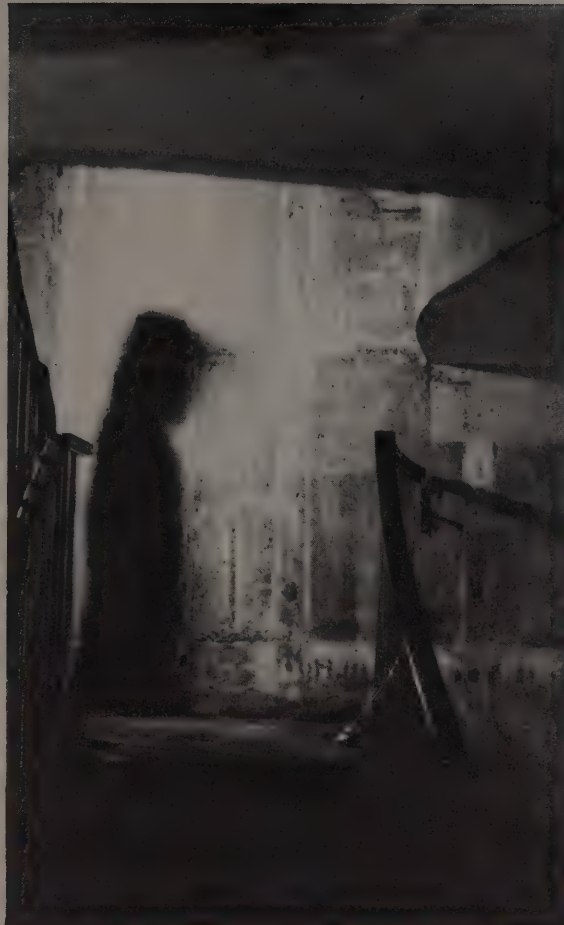
WHY ARE we waiting? There's nothing like a queue for raising a driver's temperature to boiling point, especially when traffic coming, going and simply passing by all have to criss-cross like army motorcyclists at a military tattoo. Cunningly engineered exits and entrances ensure a near-miss every few minutes. And, when patience finally is 'rewarded', drivers must struggle with coins, tickets, loose-change dispensers and the ever-threatening barrier. It's all bad enough when you are stuck outside waiting to go in; how much worse as you choke in an exhaust-filled gloom like a tunnelling prisoner-of-war waiting to escape? It all takes its toll on tempers; it may even take a toll on health; but it also takes a toll on petrol consumption, brakes, clutches, and, inevitably, in the excitement of the hunt for a space or an exit, on bodywork, too, with cars rolling backwards and forwards as concentration wanes



THE INTRODUCTION of the aerosol paint spray was a mixed blessing for the motorist. Of course, it isn't only car parks for whom the writing is on the wall, but few environments can be better-suited to furtive graffiti artists. In fact, motorists can be grateful if paint-sprayers restrict their efforts to the walls... And poverty-stricken vandals don't have to feel left out of it: without having to invest in paint, there are expensive electric-lit signs that are ever-vulnerable to the hooligan who can swing a bottle and be gone before the glass hits the ground. All of this is merely unsightly; more inconvenient—even dangerous, with a possibly mugger-infested stairway to brave—is the fact that, if the lifts are working, it's only because the vandals are having an easy week. But, never mind: at least in a multi-storey carpark, you're out of the wet...



... OR ARE YOU? A large flat roof such as forms the top floor of a multi-storey carpark is a wonderful place to measure rainfall. A blocked drain or badly sloping tarmac can rapidly convince drivers of the wisdom of having three boots: one for the car, and a Wellington pair for himself. But it isn't only the top people who suffer when the skies open up; both in underground and over-ground car parks, motorists down below may find that water dripping through the concrete levels can pick up enough lime to leave a bright stain on highly polished cars. If this isn't washed off quickly and thoroughly, it can damage the paintwork, necessitating a respray. Yet one of the most common reasons that DRIVE heard for using multi-storey car parks was that they gave both the car and the motorist 'protection from the weather'



ENOUGH TO drive you round the bend. The arrow painted on the ground in the scene top left is more than just symbolic: two-way traffic with but a single exit, and, when opposing drivers find themselves on a collision course, it's often a case of first come, first swerved. Who has the right of way? Well, who has the courage to hold his line when all around are chicken? There are no traffic signals around here. And hands up everyone who has ever followed the arrows and followed the arrows—only to find himself back where he started? All right, then—hands up any who haven't . . . ? Then there is the carpark that seems to have been designed exclusively for Minis—and the message is painted clearly on the wall, far left. Black-and-yellow stripes don't, unfortunately, make a roadway any wider or a corner less sharp, and any driver of a family-sized saloon who misses his turn by a coat of paint in a rabbit warren such as this will find his chances of compensation are as slim as the clearance he was allowed. Even worse can lurk around a gloomy corner of the stairway in the eternal night of an underground carpark. In these Clockwork Orange settings, it could be anything or nothing. A shadow? Or . . . ?



WOMEN AND children last—cars and kids don't mix at the best of times, but, in the confines of a multi-storey carpark, with no pavements and drivers who often forget to switch on headlamps, the mixture can be deadly. Especially if Mum has to struggle with a pram, lock doors—and

look after an impatient youngster. And the next time you're cursing the lifts that don't lift, think of the lady with the pram. For her, it's a choice of bumping her way down the interminable series of steps or competing with indoor boy-racers on the ramps. And Mum knows better than to try

Where are the worst multi-storey carpark in Britain? And what are the frightening, funny, expensive, dangerous, maddening, stomach-lurching, ludicrous experiences YOU and your car have had in them? Write and tell us. We'll select the best, and pay £5 for each one published. Address your letters to: Carpark Capers, DRIVE, AA, Fanum House, Basingstoke, Hants RG21 2EA.

Yes, it was tough out there—the mud and the noise, where men are men and car testers wear Wellies. The British Range Rover went over the top, prepared for a giant tussle with America's Jeep Cherokee S; but then Japan's Subaru 4wd estate arrived—small but meanly priced. This, then, was the Four-Wheeled War. When the muck hit the fanbelt, who advanced . . . and who stuck?

Subaru 4wd estate

Price £3990 On the road £4105

REINFORCEMENTS FOR THE JAPANESE FRONT

Value for money was the unbeatable quality that impressed DRIVE in May 1978, when we tested the Subaru as a £2700 conventional family saloon. Few rivals, we pointed out, manage to price themselves under £3000.

Well, here's the clincher: for another £1000 or so, makers Fuji Heavy Industries can add a four-wheel-drive facility to estate-car bodywork, putting its family hack into the same farm rut as the £10,000 Range Rover, Jeep and Co. Not only that, but Subaru-buyers don't have to stay down on the farm: at the click of a lever, they can convert back to two-wheel drive, with all the road-going fuel savings that that implies.

Is this the end of the road for the Famous Fours? Or is the little Jap just a stick-in-the-mud when the going gets really rough?



On (and off) the road

DRIVE had an easy time starting the Subaru—our testers were taken with the click-stop progression of the choke control. Warm-up is, for the most part, untemperamental, despite some naughty carburettor flat-spots we thought the Japanese had mastered.

On paper, the flat-four, water-cooled engine could have been borrowed from an Alfasud, but there the resemblance ends. Pulling hard, it sounds harsh, and boom periods at 60mph and 70mph compound the racket.

On the road, too, it is all too easy

to condemn the Subaru as sluggish for a 1600cc-engined car, but it has to be remembered that this one will reach places most others cannot; and, despite the weight of its estate body and underbody shielding, it isn't *that* much slower than the conventional, £1000-cheaper saloon-car Subaru.

DRIVE's forays over hill and dale didn't help to produce good fuel economy, but the test car nonetheless narrowly missed achieving an overall 30mpg on 2-star petrol. Whatever your conclusions as yet, no other four-wheel drive vehicle that we have tested can get near the Subaru's mpg figures.

The gear change may not be as slick as a Ford Cortina's—nor, for that matter, a Toyota's—but, given that the Subaru is a front-wheel drive car most of the time, it is acceptable. Happily, it has none of the zizzing gear noise found on our last Subaru test.

The clutch has an easy action, although it left occasional doubts about its stamina off the road: there was a strong smell of burning on a 1-in-3 hill-restart . . .

With tyres designed to chew their way through a mudbath and suspension made to take a sadistic pounding, there have to be some compromises on the road . . . and DRIVE didn't even love the ride of the conventional Subaru saloon that much. The all-independent

set-up looks good on paper but doesn't keep its promises (though it is still better than many Oriental rivals), and the low-speed ride is particularly poor.

Positive steering would be kicked out of a driver's hands on a rutted cart-track, so the Subaru's is perhaps necessarily sloppy. In Japanese terms, however, the rack-and-pinion system is still a big step forward.

Subaru braking is good, free from fade and immune to a soaking, with the brake pipes routed high and out of the way. It shows even progression up to an almost-ther best stop of 90% for a foot pressure of 55lb. The car-sized pedals might not appeal to a farmer in muddy Wellies, but his wife will love them.

Off the road, DRIVE expected the Subaru to be eaten alive by the heavyweights in this test group, but in most respects it wasn't the case. In fact, after a day of driving across terrain that could be used for tank testing, it was the only vehicle that hadn't had to be pulled out of a giant mud pie.

The surprise was that, with its good ground clearance and grippy tyres, it could get to many places using only *two*-wheel drive, leaving us asking if the four-wheel drive facility really is worth the extra £900. But, when you are bogged down, it's comforting to



be able to sit back and marvel at what a four-wheel drive can do.

The Subaru *didn't* do the job with the Range Rover's aplomb—we suspect that nothing could—but it made the Jeep look crude at times. And its ride over less-arduous green lanes lets you know that the car is well made, with an almost total absence of creaks.

Inside story

Vehicles that can take muddy fields in their stride ought not to be carpeted, so the Subaru's floor is covered by sturdy, well-fitted rubber matting, and there are sensibly designed scuff guards on the base of the doors. Plastic-covered seats, too, may not be as luxurious as the cloth-covered variety, but they are more resistant to soggy dogs and such. The snag is that they also allow the driver to slide around.

The basic but easy-to-read instrument layout of the saloon Subaru needed no changes for use in the off-road estate, apart from a green light to let you know when four-wheel drive is engaged—vital, for apart from a slight heaviness in steering there are no clues while driving, and, because there is no differential between front and rear wheels, speeds in four-wheel drive are restricted to under 50mph.

Switchgear and minor controls



work well and are easily to hand. Our only complaint is a rear-window demist switch that is hard to find in the dark.

The Japanese drive on the left, so British buyers will be pleased to find the Subaru's main stalk control on the right of the steering column for the indicators, headlamp dip and flash, 2-speed wipers and electric washers; there's a smaller one on the left for the essential tailgate wash-wipe.

Headlamps are operated by a pull-out knob on the righthand of the facia, and though the tungsten sealed-beam units on the test car were poorly adjusted we deemed them adequate.

Like most Japanese builders, Subaru fits a standard push-

button radio, but it's a medium-wave-only device of poor quality.

Ironically, the Subaru was the only car in DRIVE's trio to have reclining seats, but they could not be expected to match the arm-chair proportions of the Jeep's or the Range Rover's. Indeed, there is nothing subtle about the support they offer, and the back seats lack comfort, too.

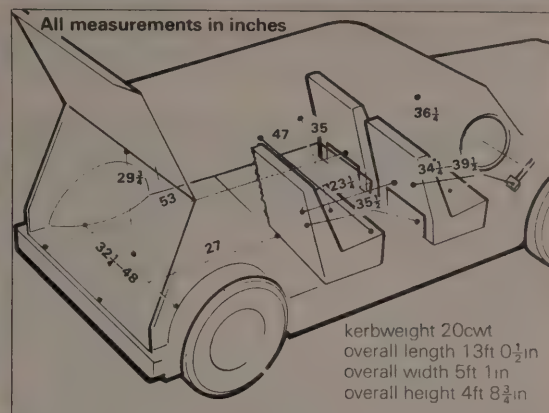
Legroom is in short supply, front and back, but the Subaru can swallow a lot of luggage—especially when the back seat folds to produce a 53in-long platform. Heavy objects, however, need to be lifted 2ft off the ground—the penalty for having good ground clearance. Oddments space consists of a lockable glove-

box, a parcels shelf and a map pocket in the driver's door.

The heater's ability to recirculate the car's air is useful on dusty off-road lanes as well as in traffic jams, but in too many respects it is disappointing—fiddly to adjust and slow to respond to the driver's needs, producing a stuffy car at times; and it's an effort to open the stiff windows. Rear-seat passengers find that little warmth filters through.

The ventilation system, on the other hand, is better than many that DRIVE has encountered, with a powerful flow from either end of the facia that cools your face, not your fingers.

Safety is, of course, aided by the four-wheel drive facility, which



Jeepers, creepers

Cars with power at every corner

should help Subaru keep their footing in ice and snow. Secondary safety includes the usual collapsible 'safety zones' surrounding a rigid passenger cell.

Overall, the company has given more than a passing thought to keeping its customers alive, but defects include the far-too-usual shortage of padding along the windscreen header rail, and the absence of child-safety locks on the rear doors.

Doors have been designed to stay closed in the event of a side-swipe, and Britax inertia-reel seatbelts are standard—although the position of their mountings on the central door pillars won't suit tall drivers.

Living together

The Subaru saloon that DRIVE tested last year was poorly protected from rust, and sadly this off-road version is no better. Our expert declared that there had been 'virtually no attempt made to protect the underside of this car'. All important areas such as sills and wheelarches were missed completely, and box sections, too, look ill-equipped for a hard life. Rust was already weeping from the 3000-mile test car's seams, and dirt poultices were building up in nasty mudtraps, such as behind the headlamps.

Mudflaps fitted front and rear go some way towards protecting the well-applied paint, but, like the Jeep, the Subaru's metallic finish seemed rather 'posh' for an off-road vehicle.

Underbonnet, only the engine-oil dipstick is awkward to reach, but DRIVE admired the separate dipstick for the gearbox level.

Getting to grips with the works demands the removal of the spare wheel and air cleaner, though routine jobs look then to be simple.

With secondhand Subarus still rare on dealers' forecourts, ownership costs are still a matter of guesswork. But if demand outstrips supply, prices will be high.

Whereas many Range Rovers rarely leave the confines of London's West End, DRIVE cannot imagine anyone buying a Subaru for its snob value. It's a workhorse, and proud of it; and, if you need a go-anywhere vehicle for around £4000, what else could you buy? Perhaps a Russian-built Lada Niva, but that won't have the Subaru's road-going economy or refinement—and it comes only in lefthand-drive, currently.

DRIVE also suspects that many Range Rover owners buy more car than really they need to gain that four-wheel drive facility.

If you are still unconvinced, how about buying the Subaru to tide you over while you wait a few years for your Range Rover to arrive...?

Jeep Cherokee S auto

Price £9499 On the road £9604



AMERICA SENDS IN HER BIG GUNS

Until very recently, any Briton who knew what a Jeep even looked like was either old enough to have fought alongside the GIs in the last war or had seen too many John Wayne movies. But BL's inability to satisfy demand for Range Rovers has led to an American revolution, with the American Motor Corporation quick to spot the possibilities of exporting its legendary four-wheel-driver to Britain.

Jeep's models run from work-horse rivals of the Land-Rover to the upmarket Cherokees, aimed at well-heeled but frustrated Range Rover buyers. DRIVE gave the Yanks a chance to shine, and asked for the five-door Cherokee S V8 automatic. Would it be at home on the range?

On (and off) the road

Jeep's leviathan tips the scales at 2ton, so, with the meaty 5.9litre V8 filling the engine bay, AMC is not exactly using a sledgehammer to crack a walnut. Fuel pours in via a Motocraft twin-choke carburettor—and we mean pours: we used 75gal of 2-star on our 1000-mile test—an overall 13½mpg.

Dip the throttle slightly, and the Cherokee burbles into life after a moment's engine churning and

warms up quickly. Idling speed on the test car was annoyingly high, though, and putting it right proved beyond the knowhow of our roadtesters.

The law-abiding might be interested to note that, when travelling at an indicated 70mph, we were doing a true 61mph.

Stepping smartly away from the traffic lights, the Cherokee can leave some sports car drivers gasping in its wake, with 30mph reached in a remarkable 3.6sec. Things aren't so impressive at higher speeds, with 60mph being 13.2sec from standstill (remember the engine capacity); but then American buyers do have to abide by what Britons may regard as punitive speed limits.

With so much torque available, the Cherokee hardly needs its low gears... which is just as well. The automatic box tends to like hanging on to top gear, but there are no performance gains to be had by over-riding auto selection from standstill. Alarming, if you try, there are no stops along the way, and the selector can be pushed through Drive into reverse!

The Cherokee will not change down from 2 to 1 above 10mph, nor from Drive to 2 above 16mph using part throttle. Flooring the

pedal produces changes up at 18mph and 48mph, but the auto down-change is jerky.

The suspension set-up makes you wonder which end of the car is which. Four-wheel drive resorts to a live axle at each end, with leaf springs and telescopic dampers; anti-roll bars are deemed unnecessary. And, as we expected, there is quite a bit of body roll, though never enough to become alarming.

At first, it is difficult to drive even in a straight line, so vague is the steering around the straight-ahead: Americans favour lightness, and this recirculating-ball steering certainly gives that.

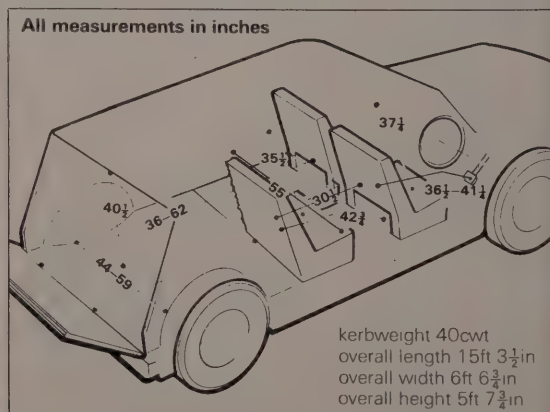
Pushed hard into corners, the Cherokee displays a mild tendency to go straight on, with all tyres squealing—an impressive sight; but the beast is easily tamed by backing off on the accelerator.

We expected the ride to be something of a compromise, bearing in mind the car's off-road capability, but it is 'typically American'. Soft and bouncy. Hardier British buyers can opt for a heavy-duty suspension kit—a £103 factory-fitted extra; but without it, the test car was happiest at a gentle, 'freeway'-style 60mph, displaying a very impressive level of comfort... though even baby humps could set the front end pitching.

The giant brake pedal offers plenty of room for a Wellie-clad size 12, but demands a he-man approach. DRIVE's brake-testing started well, with reasonable progression up to a best-stop of 95% for a pedal pressure of 100lb.

Brake fade is, however, a big problem for the Jeep. Just imagine the 2ton Cherokee towing a 7000lb trailer down a mountain pass—not a time to discover that pedal pressures are rising... Worse, especially in such a cross-country dreadnought, are the nine prods on the pedal demanded to restore full efficiency after a soaking.

The absence of the hard-suspension kit, or even knobby tyres, almost certainly marred our impression of the off-road Cherokee. Its ride on 'mild' green lanes was as good as its power; but over the real rough stuff,



limits are set by how much agony the occupants can endure.

Quick driving off-road produces sickening leaps, dives and crashes drowned only by human protest. It grounded one end after the other of the test car.

The automatic gearbox is a boon off the road, allowing the driver to concentrate on more important things. There is a low-ratio lever—badly placed on the passenger side—but DRIVE never needed it to climb even the steepest hill.

Drivers who do manage to get bogged down can delve into the glove compartment(!) where they will find the switch for Jeep's Quadratrac—a gadget that directs power to wheels that can use it, avoiding wheelspin. Our testers found it made little difference, but that was probably the fault of the road-going tyres fitted.

Inside story

The Cherokee's armchair front seats and settee-like rear bench are covered in genuine Levi denim—complete with buttons and badges—and are very comfortable. They could be more comfortable still if they reclined and had head restraints.

One tall tester complained that he couldn't get far enough away from the nicely-padded steering wheel (which, by the way, has an excellent tilt mechanism). But legroom is unsurpassed.

The rest may be the latest thing in America, but it looks distinctly 1950-ish to European eyes, with features such as a floor-mounted dipswitch. There's no shortage of instruments, with a central speedometer flanked by fuel, temperature and oil-pressure gauges and an ammeter.

Though all the dials are easy to read, we didn't like the way they reflected in the side windows at night. Warning lights let you know if the parking brake is on, or if Quadratrac drive is selected.

Wipers are not converted to suit righthand-drive, and leave a large unswept area to blinker the driver. Otherwise, visibility from the driving position is superb.

Minor controls are something of a hotchpotch, with a pull for the lights and a twist for the wash/wipe. Side-by-side switches operate the rear de-fogger and powered rear window—the latter a necessity, as the tailgate has to be opened from inside the car, which can mean getting yourself muddy as you lean in.

The righthand steering-column stalk is the find-it-and-forget-it gear selector. On the left are indicators and—an attractively-priced option at £88—a 'cruise control' that allows any pre-determined speed to be held.

As a people or luggage transporter, the Cherokee wins nothing but praise, and, if more room is ever needed, the back seat can be

folded out of the way or removed. There are some useful cubbyholes inside—sadly, none-too-secure—but a roofrack is a £109 option.

Four doors and a tailgate make entry and loading easy, but a high sill is the price of good ground clearance, and children and the less-agile will find the seats a long way up. Once in, a bit of off-road work will swiftly make passengers aware of the absence of grab-handles, and a centre-armrest would be as welcome in the erect rear seat as it is in the front.

Being slab-fronted, the Cherokee is more likely than most to suffer from wind noise, and listening to the hi-fi is a strain at 65mph or more. There was noise, too, from the big radial-ply tyres, and special off-road 'boots' would no doubt be even noisier. The engine only becomes harsh-sounding when pushed hard.

Cherokee heating and ventilation makes us think Jeep must be keen to sell the optional air-conditioning system—not cheap at £780. Main grouse is a total lack of face-level ventilation: even with the fan working hard, we needed a window open. (Drivers are warned not to open the tailgate window on the move as it will suck in exhaust fumes.)

Cherokee drivers certainly believe that they will come off best in a crunch, and they could be right. But there are safety omissions, such as head restraints and child-proof door locks.

Living together

The well-chosen underbody sealant looks well applied, but the sills are paint-protected only, and the matt-black finish was already chipping off the grille of the test vehicle. The blue metallic paint was evenly sprayed on, despite a few nibs, but is it practical?

DIY types will need long legs, or a box on which to stand, for getting to grips underbonnet, but most check items are easy to locate. Having tried to change a wheel—the spare is mean-minded steel, not alloy—we reckon that most owners will call out the AA.

Depreciation on the new model is a matter for guesswork as yet; but insurers view the Cherokee as a 'special'—rates on application.

We cannot regard the Cherokee as a serious rival to the Range Rover: the British vehicle remains uniquely desirable as a rich man's toy or a workhorse. The Jeep's advantage is extra room and doors, but these have to be set against its tremendous thirst and surprising crudities (for a £10,000 vehicle) such as its ventilation.

Where the Cherokee may however score is in its instant, off-the-shelf availability—some Range Rover buyers are sure to tire of queuing for years to buy the car they want today.

Range Rover

Price £9151 On the road £9261



IF YOU HAVE THE TIME AND THE MONEY...

The amazing thing is that Rover had the lucrative off-road market all to itself for so long. For nearly a decade, demand has consistently outstripped supply, and the announcement at the recent Motor Show of plans to increase production should go some way to making the Range Rover less vulnerable to profiteering.

The model, first seen in 1970, is also one of the least altered, and, not surprisingly, well-kept two-year-olds fetch prices far higher than they cost new... and our lament, in a 1971 test, that the Range Rover cost an 'expensive' £2200, now looks ludicrous.

Can any vehicle that increases its resale value by 5½p for every mile driven in its first 2½ years be a bad buy?

On (and off) the road

Unlike the Land-Rover, whose appeal has always been strictly utilitarian, the Range Rover sets out to combine uncompromised off-road working capabilities with luxury-car characteristics. If anything has to give, it must be economy: not for Rover the appearance of a workhorse without the guts to back it up. There is a beefy 3½-litre power unit underbonnet and permanent four-wheel drive (with, we suspect, more gear levers inside than many owners know what to do with).

Not surprisingly, petrol consumption is heavy compared with similarly powered saloons or smaller cars with comparable performance, yet it remains comfortably superior to the Jeep.

A maximum nearing the 'ton' and 0–60mph in 15.7sec feel impressive in a vehicle of this build—its four-wheel-drive blast-off from rest in our standing-start test was a revelation in itself. Equally captivating is the sheer amiability of the silky V8: it will waffle away from 15mph in fourth gear, if you

wish, and bowl along in the fast lane of the motorway.

Overdrive slashes engine effort to a trot at 70mph, but it isn't essential to maintain decorum, and it affects acceleration noticeably if retained in give-and-take conditions, with 30–50mph and 50–70mph each taking some 10 sec longer than in fourth gear.

Nowadays, most of the bad baulking in gear changing is eliminated, but the lever's long, swinging action, 'don't rush me' synchromesh and obstinate reverse gear spoil things.

Gear whine reminiscent of an army lorry gives the vehicle a false impression of fussiness at 40mph, but press on and it feels much easier at twice the speed.

Our other original 1971 grouse—the Range Rover's desperately heavy steering—is rectified by a power-steering option that avoids the over-lightness that afflicts the Jeep but reduces turns between locks from 5½ to 3½. We wouldn't have a Range Rover without it, for even high-speed stability is enhanced (not usually true of power steering). With it, the car corners briskly and is completely predictable. Usually, it's how high-seated passengers fall about that limits cornering speeds.

Ride comfort on ordinary roads is supple and acceptable, but no more. It can, in fact, feel a little loose-limbed and wobbly at times—but it does, after all, have two live axles leaping about below.

Head off the road on to the rough; however, and one's opinion is transformed. It copes nonchalantly with ruts and ridges that a walker would struggle to negotiate, and in a way that neither the Jeep nor the Subaru can match. Its hill-climbing ability is almost magical: you feel sure that the car will capsize before it loses traction.

All in all, it's no wonder the

model enjoys fanatical loyalty among those who really exploit its off-road capability. You quickly develop an irresistible urge to charge across rough ground or wade rivers for the sheer fun of it.

In general, the brakes are fully up to saloon-car standards, except for an early tendency when unladen to lock the rear wheels—a rear apportioning valve would be the answer. The all-disc system resorts to a separate parking brake in the transmission, but we were disappointed by the effort needed to secure the car on a steep hill and—worse—release the lever afterwards.

Inside story

After parting with nearly £10,000 for a Range Rover, the first realities to face are that you've only two doors, that they're big and cumbersome (no effective checks on gradients, for instance), and that you have to heave a front seat forward on its runners every time someone gets in the back.

Twenty inches can be a big step-up into the cab for some people, and the driver's knee can easily make painful contact with the choke. But the dining-chair driving position is splendid, and, despite the absence of rake adjustment, both front seats must be high on any osteopath's very-short-list of cars with anatomically correct support.

Most aspects of the fascia and control layout have stood the test of time well. The main dials sit prominently in a binnacle, with fuel and water-temperature gauges and a vertical row of tell-tale lights between. There are four column stalks, and four additional gauges, but these are scattered along the lower fascia and consequently are hard to read.

Outside mirrors are poor, but the interior dipping mirror complements a splendid all-round view for the driver—negotiating heavy traffic, or mist at night, is so much easier when you can see over the cars in front, or your own dipped headlamp beams.

Washers and wipers at both ends work well, and the rear glass is heated. Neat features include a

power socket on the steering column alongside the switches for fascia and roof lighting, and a choke warning that comes on only when it's time to ease it home.

Rear passengers enjoy good headroom and magnificent seat width (easily enough for three adults), but legroom is less generous than knee-room—it's usually the other way round in lower-built saloon cars. Front headrests badly restrict the view forward, but rear-seaters get a good look-out through the sliding side windows.

It's not, however, very secure in the back when the driver is cornering briskly or negotiating rough terrain: there really ought to be more to hold on to than just one another! On the other hand, the rear seat can be folded forward to extend the load space in a trice, and the split tailboard can also take weight when it's down. All-up load capacity exceeds half a ton.

Ventilation and heating were originally so well conceived that the system—unchanged nine years later—performs flawlessly.

It's a similar story on the safety front: interior padding is well thought-out, and the cushioned roof remains an object lesson to others. The inertia-reel seatbelts ('meaney' BL charges extra for these) work very well, being integrated into the seat structure in a way that other car makers are only now beginning to copy.

Living together

Despite its greater elegance compared with the Land-Rover, the Range Rover has all the sturdiness and rust-cheating properties of its plainer sister. Most external body panels are aluminium, the heavy chassis underneath is galvanised and there's a complete absence of frivolous chrome plating, unlike the Jeep.

Normal comments about rust protection don't really apply, for the Range Rover's metalwork has sheer thickness to help. And if the chosen metal cannot rust, there's no need to coat it with sealant.

Having triggered the badly-placed bonnet release, less-physical males or women drivers

will need to call for help simply to open the bonnet: it takes a mighty lift. In fact, mechanical accessibility is very easy for routine items such as plugs and points. All level checks are straightforward, too, though the Stromberg carburettors are best left to experts.

Even crawling underneath is easier with ground clearance like the Range Rover's, and a canopy on the right of the rear load deck lifts to reveal a splendid toolkit.

The handbook is a mine of information, obviously written with self-sufficient types in mind. But the servicing schedule is arduous and therefore expensive, mainly because it is assumed the vehicle is going to operate in filthy conditions. (If the worst it sees is a soggy gymkhana ground, certain checks could safely be delayed.) Likewise, spares prices are high—but they do have more to them.

Insurance rating—Group 5—is not too bad, considering the Range Rover's power and potential; and scarcity has made it a shrewd short-term investment. Overall, our calculations suggest the vehicle isn't likely to cost more to run than Rover saloons or their rivals.

Trim is essentially practical, with plastic floor coverings, yet the central hump neatly carpeted. Cloth trim is an option, but the basic pvc is probably easier to care for. Having a flat rear floor, with no ledges at the door sills, makes sweeping out much easier.

Even after all these years, the Range Rover seemed irresistible to our testers' friends and relatives, who proffered admiration not fully explained by its price-tag. But when the novelty has worn off, and the fuel bills start rolling in, a Range Rover in normal road-use really doesn't offer anything you can't enjoy at half the price.

It's when you head for the hills and go in for the rough stuff that it suddenly makes irresistible sense. As a domestic hold-all-cum-status symbol, you get questionable value for money; but as a rugged workhorse off the beaten track... the Range Rover still rules.

JEEP CHEROKEE S auto

Front engine: 5900cc/8cyl, OHV (chain); one Motorcraft twin-venturi carb; 175bhp (SAE) at 4000rpm
4-wheel drive: 3 ratios auto plus low range reduction; 19.7mph/1000rpm
Suspension: front and rear—semi-elliptic, leaf-sprung live axles
Steering: p/a recirculating ball, 3½ turns/39½ft circle; 7in wheels, HR 78-15 radials
Brakes: servoed discs front/drums rear

Parts/repairs (inc VAT)
auto box £986 no p/ex (fitting 3hr)
exhaust £70.50 (2.5hr)
headlamp unit £9.60 (0.3hr)
front bumper £137.22 (0.3hr)
laminated windscreen £63.23 (0.9hr)
oil filter £3.04 (0.2hr)
major service 5000 miles (3.6hr)

	per year	per mile
Running costs	£1307	10.9p
Loss of value	not yet known	
Total depreciation	not yet known	
Insurance group	refer	

RANGE ROVER

Front engine: 3528cc/V8cyl, OHV (chain); two Stromberg vari-jet carbs; 130bhp/5000
4-wheel drive: 8 gears; 21.1mph/1000rpm (27.0 with overdrive)
Suspension: coil-sprung live axles; front—radius arms, Panhard rod; rear—trailing links, A-bracket, self-levelling strut
Steering: recirculating-ball type, 3½ turns/38½ft circle; 6J wheels, 205 x 16 radials
Brakes: servoed discs all round

Parts/repairs (inc VAT)
clutch £68.82 (fitting 5.2hr)
exhaust £128.51 (2hr)
headlamp unit £3.34 (0.5hr)
front bumper £38.07 (0.7hr)
laminated windscreen £46.44 (2.8hr)
oil filter and points £7.07 (0.9hr)
major service 6000 miles (av 3.9hr)

	per year	per mile
Running costs	£1046	8.72p
Gain in value	£655	5.46p
Total depreciation	£1408	11.73p
Insurance group	5	

SUBARU 1600 4wd ESTATE

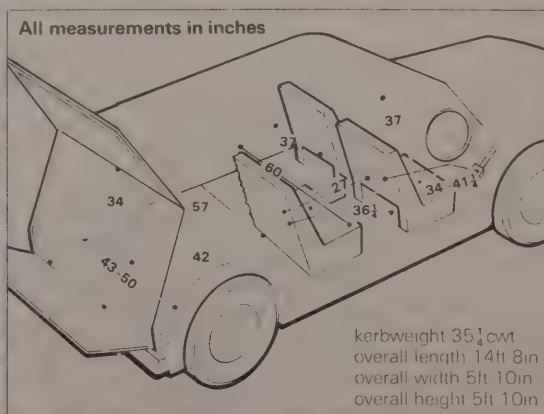
Front engine: 1595cc/4cyl, OHV (belt); one Hitachi twin-venturi carb 68bhp at 5200rpm
Front or 4-wheel drive: 4 gears; 16.1mph/1000rpm
Suspension: front—ind MacPherson damper/struts, coil springs, anti-roll bar; rear—ind semi trailing arms, torsion bars
Steering: rack and pinion, 3½ turns/32½ft circle, 4½J wheels, 155SR 13 radials
Brakes: servoed discs front/drums rear

Parts/repairs (inc VAT)
clutch £38.52 (fitting 3hr)
exhaust £105.59 (1.1hr)
headlamp unit £15.90 (0.2hr)
front bumper £46.50 (0.7hr)
laminated windscreen £77.53 (1.1hr)
oil filter and points £4.16 (0.5hr)
major service 6000 miles (av 3.7hr)

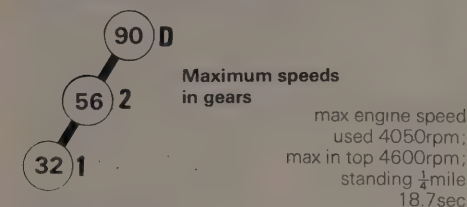
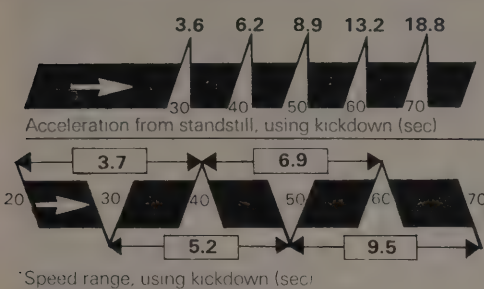
	per year	per mile
Running costs	£724	6.04p
Loss of value	not yet known	
Total depreciation	not yet known	
Insurance group	5	

What is a differential lock?

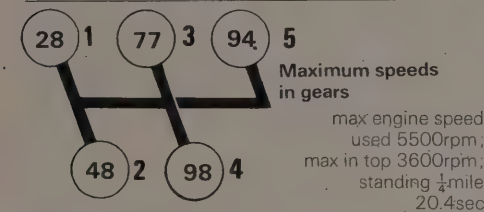
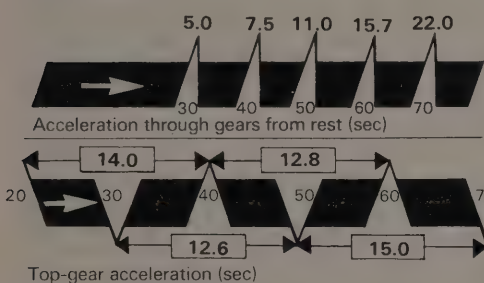
The normal family car wends its way happily along metalled roads with a pair of wheels at one end or the other driven by the engine. To prevent conflict round corners, when the outside wheel must go faster than the inside wheel, differential gearing is a standard feature. The snag (as anyone who has stuck in snow knows) is that the differential happily drives the wheel that offers least resis-



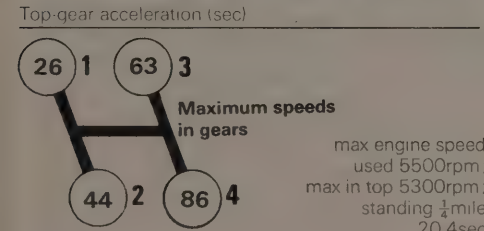
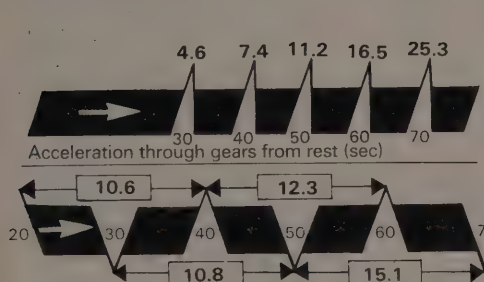
PERFORMANCE



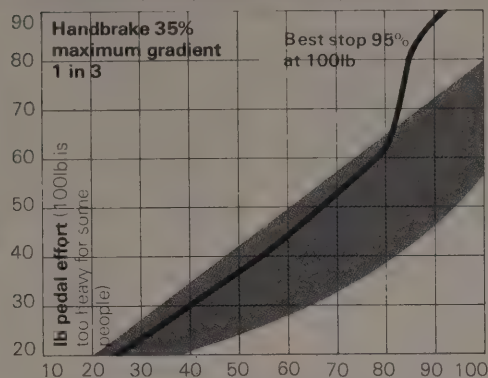
PERFORMANCE



PERFORMANCE

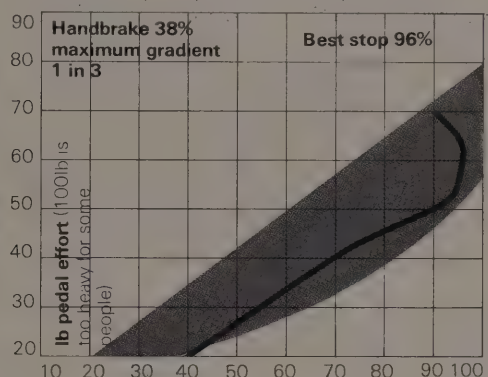


BRAKES —pedal pressures and responses



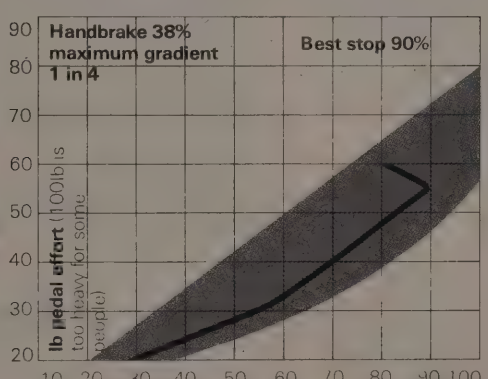
% efficiency (ideal car's braking performance falls within central zone—above, too heavy, below, too light)
Fade test pedal pressure needed for 75% stop (ideal car would show no variation)
70lb at start; **90lb** in constant use; **120lb** in severe use
Watersplash 170lb at first, **9** stops to recover

BRAKES —pedal pressures and responses



% efficiency (ideal car's braking performance falls within central zone—above, too heavy, below, too light)
Fade test pedal pressure needed for 75% stop (ideal car would show no variation)
43lb at start; **35lb** in constant use; **40lb** in severe use
Watersplash 60lb at first, **2** stops to recover

BRAKES —pedal pressures and responses



% efficiency (ideal car's braking performance falls within central zone—above, too heavy, below, too light)
Fade test pedal pressure needed for 75% stop (ideal car would show no variation)
45lb at start; **40lb** in constant use; **45lb** in severe use
Watersplash immediate recovery

FUEL 2 star/87 octane min
overall consumption 13½mpg
effective tank range 200 miles/15½gal

Normal range of consumption	
short journey, suburban	10½mpg
hard driving, heavy traffic	11½mpg
motorway—70mph cruising	11½mpg
mixed roads—brisk, 50mph cruising	12½mpg
quiet rural—40mph cruising	15mpg
Consumption at steady speeds	
30mph	18½mpg
56mph	13mpg
70mph	11½mpg
max mph	7½mpg

SAFETY CHECKS

steering: energy absorbing?	Yes	hazard warning: fitted?	Yes
front seats: secure mounts?	No	interior: well padded?	No
head restraint?	Yes	w/screen: laminated?	Yes
front belts: effective?	No	doors: crashproof?	No
convenient?	Yes	childproof?	No
rear belts: fitted?	No	petrol: spillproof?	No
		brakes: failsafe?	Yes
		load sensitive?	No

FUEL 2-star/91 octane min
overall consumption 16½mpg
effective tank range 275miles/17gal

Normal range of consumption	
short journey, suburban	12½mpg
hard driving, heavy traffic	13mpg
mixed roads—brisk, 50mph cruising	16½mpg
motorway—70mph cruising	17mpg
quiet rural—40mph cruising	19mpg
Consumption at steady speeds	
30mph	25
56mph	19½
70mph	15
max mph	10½

SAFETY CHECKS 0 = factory fitted option

steering: energy absorbing?	No	hazard warning: fitted?	Yes
front seats: secure mounts?	Yes	interior: well padded?	Yes
head restraint?	0	w/screen: laminated?	Yes
front belts: effective?	Yes	doors: crashproof?	Yes
convenient?	0	childproof?	Yes
rear belts: fitted?	No	petrol: spillproof?	Yes
		brakes: failsafe?	Yes
		load sensitive?	No

FUEL 2 star/83 octane min
overall consumption 29½mpg
effective tank range 250 miles/8½gal

Normal range of consumption	
short journey, suburban	25mpg
hard driving, heavy traffic	25½mpg
motorway—70mph cruising	26½mpg
mixed roads—brisk, 50mph cruising	30mpg
quiet rural—40mph cruising	34½mpg
Consumption at steady speeds	
30mph	45mpg
56mph	32½mpg
70mph	26½mpg
max mph	19½mpg

SAFETY CHECKS

steering: energy absorbing?	Yes	hazard warning: fitted?	No
front seats: secure mounts?	Yes	interior: well padded?	No
head restraint?	Yes	w/screen: laminated?	Yes
front belts: effective?	No	doors: crashproof?	Yes
convenient?	Yes	childproof?	No
rear belts: fitted?	No	petrol: spillproof?	Yes
		brakes: failsafe?	Yes
		load sensitive?	No

tance, and forgets about its counterpart

Why four-wheel drive?

In ordinary use, it's enough to pull or push the car along from one end or the other. However, on treacherous surfaces—with, say, one axle sunk in inches of mud—it's a tremendous asset to have the wheels at the other end capable temporarily of doing all the gripping. This is why all of the three test cars in

DRIVE's group possessed four-wheel drive.

The problem is that, unless you are going slowly in a straight line, you can't drive like this on grippy surfaces—around corners, the rear wheels always take a 'short cut', and do not rotate as fast as their counterparts at the front.

The answer is either to use four-wheel drive only when bogged down—as on the Subaru—or to have an extra differential in the centre of the car, to allow for

these axle-speed differences—both the Rover and the Jeep feature this.

Why high and low range?

If cars spent all their time travelling at bicycle-speed on flat roads, they wouldn't need gearboxes at all. The more operating conditions vary, the more gearing options they need.

The Jeep's three-speed automatic box has inherent gearing variation in its

fluid torque-converter coupling (at the cost of some power wastage), the Range Rover offers a 'second' gearbox that makes top gear in its low range feel like second gear in 'normal' high range.

It follows that the lower gears in low range seem capable of pulling the Rover up the side of a house, yet on ordinary roads these same ultra-low ratios are useless—the engine is flat out at jogging speed in first.

Supertrol 001 fights rust where you can't see.

The trouble with rust is that it does most of its damage out of sight. And by the time it's visible the rot's well and truly set in.

So how do you fight rust you can't even see, let alone reach?

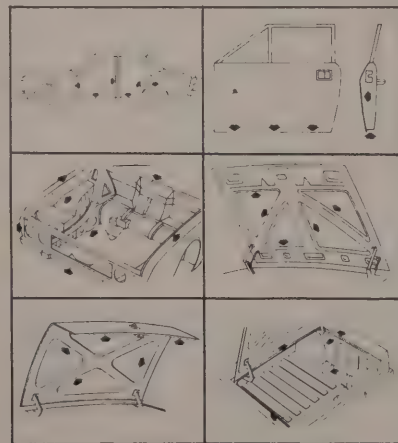
Simple—with Supertrol 001, the spray-on corrosion fighter from CADULAC. Use it as a deterrent, to protect your car before rust sets in. Or use it to fight rust that's already there. Either way, Supertrol 001 gets down to rust in a way that you never could.

JUST POINT AND SPRAY

No tiresome preparation or mixing. Just spray Supertrol 001 into the concealed danger zones: behind the bumper, under the wings, inside the doors, sills and box sections, and all those other hidden areas so vulnerable to rust attack, and so dangerous—and expensive to repair—if left unprotected.

A simple application of Supertrol 001:

- ☐ Penetrates those hidden cavities.
- ☐ Prevents rust forming in the first place.
- ☐ Stops existing rust spreading.
- ☐ Protects anything metal from corrosion: not just cars but bicycles, agricultural machinery, gardening and hand tools, boats and heavy machinery too.



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Everyman



The surprise of DRIVE's Everyman test day—when we turn readers loose—was that the Jeep came last. Denise Bewsy, Roy Kidman and David Everest liked the

bargain-price Subaru a lot, but, money being no object, picked the Range Rover. But there was a fourth Everyman—a 'professional', with lots of off-road experience. And without a hint of patriotism Cpl Philip Knight, of the Royal Corps of Transport, based at Arborfield, Berks, gave the Subaru the honours of the day

SUBARU 4WD

'I expected the Jeep to be the best and the Subaru the worst,' said Cpl Knight, 26, a married man and Ford Cortina owner, 'but the Japanese car does everything the other two can. And the Range Rover did get bogged down in the mud and need a tow ...'

'Subaru can cut this out and frame it,' said David Everest: 'The little Japanese car is fantastic. It went easily over the really rough stuff when the Jeep was struggling. My only criticisms are of its size and its lack of power.'

Denise Bewsy thought that the Subaru's only problem was its small pedals—not designed for drivers in Wellies. 'But it looks

smart, and it's terrific value. This car is ideal for the person who really wants only an estate car, and occasional four-wheel drive.'

'I have seen faster 1600s,' said Roy Kidman, 'but not across a ploughed field. It's obviously a specialist car, but it's good on the road, too. It suffers from slight lack of power, but anyone looking for a small cross-country vehicle would find it ideal.'

'A game little car,' was how DRIVE professional tester Peter Denayer described the Subaru. 'Only ground-clearance problems catch it out when chasing the Range Rover. And you do get thrown about.'

JEEP CHEROKEE

'The Jeep is a pretty good road-car,' said David Everest, 30, 'even if you do expect a 6litre V8 to be a lot quicker.' Everest, a company director from Heathfield, Sussex, normally drives a Ford Granada. 'Off the road, however, the Jeep is awful—especially if you're a passenger. The power steering is much too light, and the gadgets are superfluous. And if the creaking and groaning of the test car was anything to go by, it won't last long, either.'

'I thought it was nice to drive,' said Denise Bewsy, 'and I liked the auto gearbox. But the too-soft suspension is lousy off the road.'

'It has the power to go anywhere

you want it to,' said Roy, 'but it "bottomed" on the rough stuff again and again. It has a good on-the-road ride, though, and would make a lovely cruising car. It'd eat the miles ... and petrol.'

Phil Knight, however, was damning: 'A complete waste of time. It is far too big and cumbersome for cross-country work, and the steering is too light for road-work. The Quadratrax didn't stop us sticking in the mud, either.'

'The panel is right,' said Peter. 'The Jeep was a let-down compared to the Rover. Still, if it had been fitted with heavy-duty suspension, it might have been a different off-the-road story.'

RANGE ROVER

'The Range Rover is Number 1, isn't it? But only if money is no object,' said office manager Denise Bewsy, 21, from St Albans, Herts. She does her everyday driving in a Ford Cortina 1500. 'The Rover's greatest attribute is that it doesn't look out of place at The Savoy or in a field.'

'I nearly bought one when they cost £3000—only the consumption put me off,' said Triumph Stag-driver and insurance broker Roy Kidman, 55, from Weybridge, Surrey. 'It has space, power—everything. If I were a farmer, I'd have a Range Rover, but I'd buy a Subaru for my wife ...'

'You pay thousands of pounds

for very few advantages over the Subaru,' added Phil. 'I can't see the Range Rover as an army vehicle, either: it doesn't look soldier-proof, and could be misused by a flash driver.'

'It can do things that the less-powerful Subaru cannot,' said David, 'like stopping on a steep hill and pulling away again. The only thing I have against the Range Rover is its transmission—noisy and clunky. But this vehicle is an investment.'

'Sheer guts and power takes the Range Rover where, finally, the others just can't reach,' said Peter. 'But it is dear—like most of the best things in life ...'

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TRADE ENQUIRIES WELCOME**



MMARTIN DAVIS is a 30-year-old bachelor and executive in an advertising agency—just the customer BL had in mind when it started selling the Triumph TR7. And he has always wanted a real sports car; something to boost his image.

The styling of the British car swung it for Martin, although he gave a few moments' consideration to Italian opposition from Fiat and Alfa-Romeo. Yes, he knew all about those TR7 horror stories, but the quality problems surely would have been attended to by now. After all, he reasoned, BL must be working hard on its quality-control reputation.

Buying the dream car was not so easy, though. His local dealer, in Bromley, Kent, couldn't help; smiling salesmen shook their heads and offered to put his name at the bottom of a lengthy waiting-list. So Martin went to Henlys, in London, where he could buy the blue TR7 he wanted 'off the shelf'.

The next day, with just 161 miles on the clock, Martin drove to the AA technical centre at Basing-

stoke to begin his year as the latest recruit to DRIVE's long-term test club. And it was there that the smile of a proud owner changed to a look of disbelief...

AA engineer Chris Warwick found dirt under the paint on several panels, scratches on the boot and bonnet, chipped areas, and a resprayed nearside door.

The rear numberplate had been secured with self-tapping screws, the points of which protruded into the boot. There was excess glue round the front and rear screens, and a hole in the carpet.

There was no sign of rusting underneath, but Warwick noted that no protection had been applied, apart from an inadequate bituminous coating to the wheel-arches—where vulnerable areas had nonetheless been missed. The rear foglamps didn't work.

Underbonnet, fluid levels were correct, apart from the engine oil level, which was far too high. The distributor advance-pipe had come adrift from the distributor and the timing was out.

On the road, our engineer judged

the car's performance and handling to be acceptable, apart from three faults: a distinct whine in second gear was unusual both in its intensity and given the fact that the other gears were silent; clutch-spin at rest meant a crunch when reverse was selected, and made first gear a struggle; and steering-shudder at 50mph indicated a need for wheel balancing.

It was all... well, unimpressive, especially as Henlys had delayed delivery to 'iron out minor faults'.

Warwick's verdict? 'I realise that the days when one could expect a brand-new car to be delivered fault-free are past, and these days we are often exhausted into accepting second-best. But I would have expected the majority of these faults to have been detected by the dealer.'

'Martin Davis should take the car back and show it to the service manager. He should tell him about the paintwork and the rest, and hope for a favourable reaction. Workmanship like this earns British cars a bad name.'

Martin's verdict? 'Yes, it is poor

workmanship, but it's simply the reflection of a troubled factory, and a factory force that had its mind on something other than the car it was building. But Henlys should have spotted the faults...

'Still, I've no grumbles over the car's performance. In fact, as it gets worked in, it seems to go from strength to strength. I shall have no regrets, provided Henlys puts right what is wrong.'

And that's precisely the sort of thing DRIVE will be keeping an eye on, too, during the next year. Over that period, we'll report from time to time any trials, tribulations or triumphs Martin Davis may have, but the full TR7 report will appear in our November-December 1979 issue.

In the meantime, we welcome the views of other TR7-owning readers, and of readers who own any of the other models currently on our long-term test: the Alfa-sud 1300ti, Austin Allegro 1300 Super, Citroen CX2400 Super C-matic and Toyota Celica XT2000. David Jones' final Ford Cortina report begins on the right.



This sporting life



Ian Dawson



Stuart McPherson

FORD CORTINA 1600GL

A year in the life of...

A CAR is a real friend to me, not just a way of getting from A to B. I always give them names. This one's called "Blue", my old Ford Capri was called "Baron"—it was red—and the one before that was called "Hairy" because it felt so quick after my 1300cc Cortina.

That's DRIVE's first long-term test guinea-pig talking, Ford Cortina owner David Jones—and with a year's motoring under his belt he now has a cutting reply ready for anyone who calls his 1600GL automatic a 'Dagenham dustbin'.

David's Cortina has spent the first 12 months of its life under the critical eyes of AA engineers, who finished their checks with the verdict: 'Only by being hyper-critical has it been possible to fault the car at all during this final check . . . the body alone reflects a high standard of owner-care.'

Certainly, David Jones, 28, manager of a fuel-supply company at London's Heathrow Airport, must be the most car-proud owner that DRIVE has met. He confesses that he not only cleans his car two

and three times a week, but even polishes the underside of the bonnet and boot lid, and the engine itself. So it came as a surprise to us when David announced that he was planning a change. He has decided that a new 2litre Capri would be a better towcar for the caravan he plans to borrow from his father-in-law, and a hatchback would make life easier now that baby son Adam has arrived.

'I start looking for a new car after a year, and it usually takes another 12 months before I finally make the change. After a year, exhaust pipes wear out, tyres wear down . . . While my car is less than two years old, I can be sure that it will start every morning and be reliable.

'I need also to buy a new one before the price gap gets too wide: £1000 is relatively easy to find; the longer you wait, the more it becomes, and the harder it gets . . .'

David had never before bought a car from Friary Motors, of Old Windsor, Berks, and he suspects that, once DRIVE's involvement

continued on page 29

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Amount of loan	12 Months True interest 20.5% p.a.			24 Months True interest 20.5% p.a.			36 Months True interest 21% p.a.			48 Months True interest 20.5% p.a.			60 Months True interest 20% p.a.		
	Total Repayable	Interest	Mthly. Pay.	Total Repayable	Interest	Mthly. Pay.	Total Repayable	Interest	Mthly. Pay.	Total Repayable	Interest	Mthly. Pay.	Total Repayable	Interest	Mthly. Pay.
£	£ p	£ p	£ p	£ p	£ p	£ p	£ p	£ p	£ p	£ p	£ p	£ p	£ p	£ p	£ p
200	221.04	21.04	18.42	241.92	41.92	10.08	266.04	66.04	7.39	288.00	88.00	6.00	310.20	110.20	5.17
300	331.56	31.56	27.63	363.12	63.12	15.13	398.88	98.88	11.08	432.00	132.00	9.00	465.00	165.00	7.75
400	441.96	41.96	36.83	484.08	84.08	20.17	532.08	132.08	14.78	576.00	176.00	12.00	619.80	219.80	10.33
500	552.48	52.48	46.04	605.04	105.04	25.21	664.92	164.92	18.47	720.00	220.00	15.00	775.20	275.20	12.92
600	663.00	63.00	55.25	726.00	126.00	30.25	798.12	198.12	22.17	864.00	264.00	18.00	930.00	330.00	15.50
700	773.52	73.52	64.46	846.96	146.96	35.29	930.96	230.96	25.86	1,008.00	308.00	21.00	1,084.80	384.80	18.08
800	884.04	84.04	73.67	967.92	167.92	40.33	1,064.16	264.16	29.56	1,152.00*	352.00	24.00	1,240.20	440.20	20.67
900	994.56	94.56	82.88	1,089.12	189.12	45.38	1,197.00	297.00	33.25	1,296.00	396.00	27.00	1,395.00	495.00	23.25
1,000	1,104.96	104.96	92.08	1,210.08	210.08	50.42	1,329.84	329.84	36.94	1,440.00	440.00	30.00	1,549.80	549.80	25.83

For loans in excess of £1,000, total repayable, interest and monthly payments are pro rata. Rates at 1st December 1978.



Use this form to get your cheque quicker

To apply for your AA Members Loan complete this form and post to
Mercantile Credit, FREEPOST, London WC2B 5XA.

Surname _____

First Names _____

Married/Single _____ (Tick as applicable)

Country of Birth _____

Date of Birth _____

Are you in good health? YES/NO _____ No. of dependent children _____

Full postal address _____

Postal Code _____

How long at address? _____

Tel. No. _____

DEPT. _____

SERIAL NO. _____

CHECK DIGIT _____

For office use only

Owner/Tenant House/Flat/Rooms/
Living with parents _____ (Tick as applicable)

Profession or trade _____

Name of employer _____

Business Address _____

How long in their employ? _____

Bankers _____

Bankers address (in full) _____

Do you hold a Barclaycard? YES/NO _____

AA Membership No. _____

Purpose of loan (give details) _____

Total cost of goods or service _____ £

Amount of cash required _____ £

Repayment period required _____ months

Average net monthly take-home pay (i.e. after
deduction of Income Tax, N.H.I. Contributions, etc.) _____ £ monthly

Any other income _____ £ monthly

Please submit your latest P.60 or other annual
advice or at least two monthly/weekly pay slips

Mortgage payments/Rent _____ £ monthly

Total of current hire purchase and credit payments _____ £ monthly

Any other regular payments _____ £ monthly
(Give details)

You may make all enquiries necessary to enable you to consider this application and also to disclose to the National Credit Register details in respect of this transaction excluding any information relating to income. It is understood that you reserve the right to decline this application without stating a reason. Membership of the Automobile Association or a previous or current account with Mercantile Credit do not of themselves ensure acceptance.

SIGNATURE _____

DATE _____

It's time AA Members stopped taking expensive holidays.

If you are an AA member, it's high time you knew the services you're entitled to as far as holidays are concerned.

Did you know, for example, that we can offer you low priced holidays from Thomsons, Cosmos, Enterprise, Global, etc?

You can also benefit from special reduced rates on car hire, personal travel insurance... even low priced flights or ferry trips if you book a villa on the continent.

And that's not all.

For every £100 you pay for certain holidays, you are entitled to a voucher of £5 which you can spend on a variety of quality goods (cameras, binoculars, suitcases) from the AA Summer Catalogue.

There are lots of other money saving offers, bargains and perks which you should know about.

So fill in the coupon quickly and make sure you take advantage of your privileges.



Send to: AA Travel, FREEPOST, Basingstoke, RG21 2EA.
Please send me further information on AA bargain holidays:

Name

Address

AA Membership No.

AA

Travel

with his Cortina' became known, service improved beyond the norm: 'They once lent me a Fiesta, free of charge, while they worked on my car. I was going to do the job myself, but they insisted . . . I was chuffed to bits.

'The salesman has said that he will give me a good trade-in price, too, because he knows the Cortina has been well looked-after—by Friary's own mechanics and by the AA's experts.

'Everything that the AA found to be faulty has now been fixed. Like the window that whistled—an easy job, in the end, though it did take five months. But there is still a squeal from the wheels . . .

Over 12 months and 7749 miles, David Jones has averaged an unimpressive 21mpg, but he remains philosophical: 'I drive only three-and-a-half miles to work every day. I might travel two miles across the airport during the day, but the engine never gets warm. I've done only two longish runs, and then the consumption rose to 26mpg.'

David was concerned about the

Ford strike, and he stayed away from the NEC Motor Show partly because Ford wasn't represented. That sort of hold-up could mean a delay in buying his new car until next August, when the new registration letter comes out, instead of in January—his usual practice.

No doubt about it: David Jones is a Ford man. He bought his first, a Cortina MkII, in 1969

because he liked its size and shape and the ease with which it could be maintained—important for a man who does much of his own servicing and repairs.

He takes some pushing before he will admit: 'If Ford cannot deliver, I might look elsewhere. It would have to look as good as the Capri, though, and have a reputation for reliability. How

much is the Volkswagen Scirocco? That's the one foreigner that has caught my eye. The Audi Avant is nice, too.'

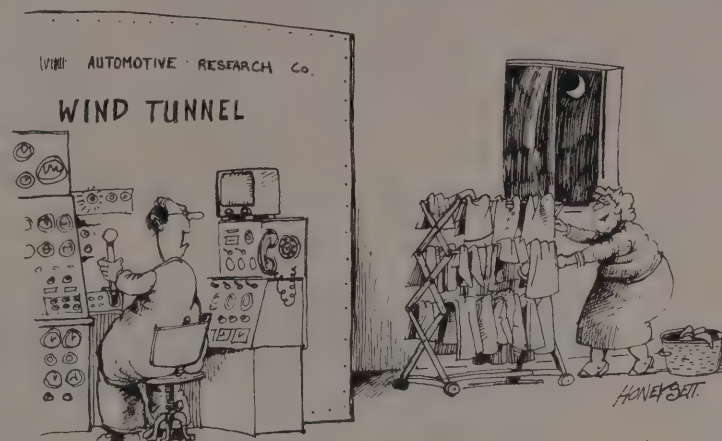
Asked about Ford's lack of a factory-applied rustproofing process, David replies in the words that car manufacturers must love to hear: 'I don't keep my cars long enough to need it. I'd be paying for someone else's benefit. And none of my Fords has shown a sign of rust.'

Well, that's not strictly true: AA experts found rust making a home on his car at its very first inspection in November 1977, but it has to be said that it was not making a meal of the car by the close of its long-term test.

At the year's end, DRIVE gave David's Cortina the AA's 175-point used-car inspection. Which revealed that . . . whoever buys the Jones-mobile will be buying a winner.

In the next issue, we review Tony Colin's Alfasud year, and initiate a housewife and her Peugeot 104SL into the rites of the DRIVE Long Term Test Club

BOB OXFORD



'I shouldn't really be doing this, Doris'

DIARY OF A CORTINA

It all began on 22 November 1977, when David Jones collected his new Cortina 1600GL and parted company with £3746.78. The next day it was in the hands of AA engineers, and our Long Term Test Club was born.

On the rolling road, the speedometer and odometer were found to be under-reading—an annoyance that David decided to live with. He was also unconcerned about the lack of rust protection: after all, it was no worse than on other Fords he'd owned, and he had never sold a

rusty one to the next man. Patches of rust inside panels were also unlikely to appear on the other side before the car was moved on, and the fact that a wing had been resprayed was regarded by David as a bonus—after all, it was an extra coat of paint!

AA engineers also discovered a loose fuel pipe, which came off when it was prodded, a misaligned boot lid and a loose boot lock. But these were easily remedied—unlike the 'whistling window' found on the road test.

It took David until the following April to cover 1500 miles, when

the dealer did the first service. And the window still whistled . . .

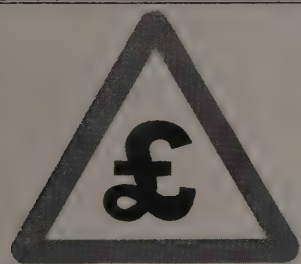
He was back with the AA in May, still short of the major, 6000-mile service. Friary Motors, however, won his friendship by providing a car for a day, free of charge, while it repaired the Cortina's automatic choke. But the window defied all-comers. In fact, David was on his second whistling window, for a specialist broke the first while working on it.

On 12 July it was time for DRIVE to check on David as well as his car. With 6000 miles coming up, he decided to tackle the major

service himself, and diligently worked through Ford's check-list, taking two to three hours to do the job. Our engineer was impressed, and had a hard time finding a few faults. And next day, Friary Motors stopped that window whistle . . . by replacing two defective screws with bolts.

The penultimate long-term test check came on 6 September, and again Friary Motors was seen to have been busy. Steering geometry had been adjusted to stop uneven tyre wear, and oil leaks sealed.

David was very happy, and determined to stay loyal to Ford.



MONEY

How to take it with you

'HOW MUCH money can I take out of Britain?' It's a question asked by many of the 7million holiday-makers who head for the sun and sea (and the 200,000 or more who emigrate) each year.

Happily, the rules have been relaxed considerably since the bad old days of the £50 travel limit. Holidaymakers going abroad may now take up to £500 each in foreign money or travellers' cheques, plus £100 in sterling. And if you take a chequebook,

cheque guarantee card and credit cards, you can also use them, within the limits set by the bank or credit firm. (But don't expect to buy a car or a villa on them!)

Anyone needing more than £600—someone travelling abroad for a couple of months, say, or a pop star staying in the best hotels—can usually get permission through a bank to take out a reasonable extra amount.

Those settling abroad can now take up to £40,000 per single person or per family, which includes husband, wife and unmarried children under 18. But, if you are going to a Common Market country, you can take up to £80,000 per family; and there's no limit if you are going to live in what they call the Scheduled Territories—all that's left of the old Sterling Area, including the Republic of Ireland, Channel Islands, Isle of Man and Gibraltar.

Any assets you leave behind, over and above the legal limits, are usually 'frozen' here for four years, during which time you can normally take out the rent, dividends or interest they're earn-

ing. After four years, you can get your hands on the lot.

If you're in a hurry, you can take the frozen assets abroad provided you change them into special 'premium currency'—but, with the premium at about 40%, it means that, if you changed £1400 into foreign currency, you'll get only £1000 at the other end.

The same goes for anyone wishing to invest outside Britain. If, for example, you were buying a £10,000 flat in Spain, it would cost £14,000 by the time you had bought the premium currency.

One of the best savings plans around—especially for those who pay a lot of income tax—is a save-as-you-earn scheme with a building society. You can put in up to £20 a month, and over five years it earns 8.3% a year free of ALL tax. Leave it in a further two, and the return goes up to 8.6%.

To a basic-rate taxpayer, that's as good as getting nearly 13% on your money before tax; to someone who pays tax at 50%, it's worth 17%.

Put £1200 into a building society

SAYE scheme, and it should grow to more than £2000 in seven years.

Always take the *cash*! That's my advice to people retiring from work and offered a choice between taking a full pension or having a lump-sum and a smaller pension.

Example: One man was offered either £2000 a year pension or £4500 lump-sum, plus only £1500 yearly pension. If he simply put the £4500 into a 9½% investment account at the National Savings Bank it would earn him £427 a year, bringing his total income up to £1927, and he would still have the cash handy for emergencies or to leave to his family.

If he invested it in a British government stock, he could get 12% on it—£540 a year. That would increase his total income, and he could sell the stock whenever he needed to.

If he wanted to enjoy it to the full and leave nothing behind, he could buy an annuity from an insurance company that would pay him £700-a-year for life if he were to start it when he was 65.

ROBERT HEAD

AS HOLIDAY PACKAGES go, our camp looked more like a hamper from Fortnum and Mason. For standing among the tents and caravans on the Brittany site were a Rolls-Royce Corniche, two Bentleys, a Daimler, three Jags and various Rovers.

Whatever else an inclusive motoring deal may be, these days it certainly isn't a mass, plastic-wrapped charter-jet holiday...

My experience may have been unusual, but it did emphasise how successfully the many new package arrangements cater for all types and tastes of motoring holidaymaker, allowing them to retain their identity and enjoy a reasonable amount of individual choice.

Britons such as yours-truly can pile into their C-registered Triumph Herald and take a go-as-you-please hotel tour of France just as easily as an Aston-Martin owner can buy another all-inclusive holiday with a self-catering villa in Italy. And, more or less, choose their own route and timetable.

It has taken a long while for many to appreciate that the average motoring package-holiday doesn't mean going in convoy from one high-rise hotel to another; that all auto-deal roads do not lead to Benidorm or Lloret de Mar.

And it has taken the increasing cost of petrol, Britain's depressed economy and a lot of other high-cost problems to create the present great demand for, and supply of, motoring inclusions: the simple fact that most of us are now unable to afford big-mileage, free-wheeling tours round Europe has made it easier for the specialist companies to arrange any number of money-saving travel deals.

The advantage of being able to book low-cost inclusive arrangements that include the return-ferry fare and booking, a wide range of accommodation, en route hotels, even tents and caravans, plus extras such as 24-hour emergency service, has swiftly appealed. The half-dozen or so specialist auto-deal firms—plus most of the ferry lines, such as Sealink, which offers similar packages—have also been quick to see that the greatest profit lies in catering for the flexibility and independence that private-car transport offers. Thus, the resorts and touring regions offered are generally away from the usual, mass-

package centres, cover a more interesting and diverse selection of places, and strongly feature that supremely independent type of holiday called 'self-catering'.

This year there will be a large choice, with villas, apartments, cottages and camps on offer to the family motorist. In fact, some three-quarters of the scores of auto-deals available will be for self-catering holidays, and approximately half will be on camping and caravan sites.

Most of the sites feature ready-erected tents and static caravans, but a few will accept tourists' own gear and trailers. The overall cost of camping is not especially low—£150-£250 a week for a party of four, in most cases—but, since it includes the ferry fare, plus all cooking gear, crockery, cutlery and gas, as well as roomy tents with beds, it is good value.

DIY campers can also rent a tent from



GREAT ESCAPES

New Year sails

the AA's new hire-service unit at Snarsgate Street, Dover CT17 9XA (tel 203655). There are two package deals based on a four-berth and a six-berth frame tent, each accompanied by a groundsheet, cooker, table, beds, chairs, gas lantern and cylinder—even a roofrack. Rates are £3.50 and £4.50 a day respectively, plus VAT, for a minimum of five days.

Cost of caravans is more—usually £175 to nearly £300 a week—though you save by not having to take one across on the ferry. But, if you prefer freedom of movement, certain cross-Channel lines, such as Sealink, do offer hire-caravans—collected on the Continental side from just under £40 a week.

By far the biggest choice of campsites is in Brittany, but there are others on the Basque coast and Mediterranean shores

of France, in Italy and on Spain's Costa Brava, and also a few in Alpine regions and Scandinavia.

Other self-catering deals cover an even wider range, from Finland to Yugoslavia, although here too Brittany dominates.

Accommodation ranges from villas to modern apartment blocks, log cabins in Sweden to holiday villages in Yugoslavia, French cottages to Austrian farmhouses. Charges vary, depending on the number of holidaymakers, season and route taken from Britain, but expect to pay from around £150 to more than £500 a week. And even the top rates can be good value, since they are usually spread around six to eight persons and, in the case of AA Argosy Driveaway holidays, include ferry crossings for two cars.

Most auto-holiday package companies in fact expect the majority of customers to take a stay-put Continental holiday in 1979. One operator tells me: 'Since the cost of petrol and overnight stops has increased so much, there has been a big switch from touring to resort-type holidays. In fact, a large proportion of our clients go hardly more than 150 miles from the ferry on the other side. Many seem simply to use the car as a means of shifting the family and the luggage, and basic foodstuffs, from one doorstep to another.'

Nonetheless, there will also be a fair selection of touring packages on sale this year. Most will feature cheaper (many also think *nicer*) overnight stopping-places, such as small country hotels or those charming *auberges* all over France; but at least one company has more-luxurious French chateau-hotels.

Several tour firms, such as Car Holidays Abroad, have a go-as-you-please voucher system in which the first and last night's hotel is booked in advance; in between, you invite each hotel to book the next one of your choice.

Among auto-packages, including stay-put hotel holidays, is that sold by Argosy in which you have a choice of 100 of the independently owned and attractive Logis chain of hotels spread through the French countryside. There is a basic six-night stay, but you can add another six nights, or move on to another Logis for a similar period. Cost per week varies

MOTOR RACING IS DANGEROUS. That's what it says on the back of every ticket issued, and on a regulation number of posters sited in public areas at every race meeting, and goes on to tell you that you are there at your own risk and that no liability is accepted for your welfare.

Well, the public *knows* that motor racing is dangerous. It's one reason why they flock to a sport that claims lives every year.

The circuit owners and promoters know that it's dangerous, and they struggle to provide safety measures for cars that, each year, get faster and faster.

Safety, so far as circuit owners

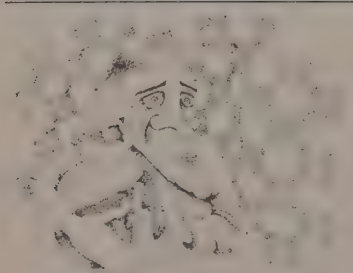
are concerned, means miles of metal Armco barrier, anchored on solid posts round the track. Armco prevents out-of-control cars spearing off into the crowds; it also provides something more acceptable for them to hit than, for instance, straw bales which catch fire, unyielding trees or solid-earth banks.

Six years ago, Armco was thought to be the complete answer to circuit safety. The only problem was that cars and motorbikes raced on the same circuits, and Armco was everything that the bike men wanted to *avoid* when they took a tumble. The compromise was to use multi-layer

rows of wire netting on corners that attracted incidents and accidents, trapping wayward men and machines like giant metal cobwebs.

Armco and wire catch-fences have saved many lives. But Armco has killed people, too. Cars flipping on to its top edge have been cut in half, and badly secured Armco has allowed cars to penetrate between layers, causing ugly accidents.

The circuit owners do their best: no one wants gruesome accidents. Nivelles, in Belgium, was a brand-new, tailor-made circuit that was said to have all the answers. Enormous run-off areas



MOTOR SPORT

Safety last

considerably, but it can be from as little as £60 per person in early summer to £300 for a good hotel in high season.

One of the more costly but popular hotel auto-tours in 1978, to be repeated, covered the lakes and forests of southern Finland. It included double ferry crossings there and back—Harwich—Hamburg, Travemunde, W Germany—Helsinki—with the latter sailing in the world's largest and fastest car ferry, *Finnjet*. Booking the two services independently (let alone the various hotels) would clearly be too much bother and expense, and the simplicity of being able to get it all done with just one booking was—and will be—a big attraction.

It can, however, be difficult to determine exactly what the value-for-money content is when looking at the many and

varied motoring packages. So much depends on how many persons travel together; whether one or more car is involved; the route taken across the Channel or North Sea; and, of course, the time of year.

If you are more used to charter-jet packages, it is easy to mislead yourself, for an auto-deal in nearby France can seem much worse value than in farther-away Italy: the prices look the same. You need to do your own sums, calculating the cost of petrol, meals and any overnight stops, plus perhaps tolls, and add that to the price of the basic package.

While all the specialist tour firms known to me are reputable and certainly don't set out to confuse, it always pays to read the *small print closely*. It sometimes includes (or leaves out!) items such as

24-hour emergency service, insurance, en route hotels, etc.

Ask yourself: does the deal for an hotel stay or tour include full board (not very common), *demi-pension* (more likely), or simply bed-and-breakfast? European meal-charges can be high, and what may seem a cheap inclusive can turn out quite expensive. And in your final reckoning if you take any but the shorter cross-Channel ferries to and from the Continent don't forget to check on *surcharges*.

It all may seem to make the motoring deal less convenient than the conventional kind, but really it is a small price to pay for the greater independence and freedom offered. At least, I believe it to be so. And since most are based on any length of car, you can always afford to take the Rolls!

BILL GLENTON



HELLO, SAILORS...

Of course, you don't have to wait until summer to cross the Channel: ferry operators are continually racking their brains to think of ways to fill up their ships by luring people over the water in winter. Most are tied to duty-free shopping, in an attempt to make economical sense of what might be construed a mad impulse.

A day-trip Streak to France, for example, with P&O Normandy Ferries brings a *free* litre of whisky or gin with your ticket, plus other duty-free goods—an offer that holds good for both the Dover-Boulogne run (£8.50, Monday-Friday, £10 Saturday-Sunday) and the Southampton-Le Havre run (£14 any day). If there are at least four of you travelling (children under four go free, so don't count), P&O offers a £4 cheapie Dover-Boulogne day-return.

Sealink and Seaspeed (Hovercraft) offer Go French Day Excursions from London to Boulogne or Calais for £7, or £5 from Dover; Townsend Thoresen also does day-trips between Dover and Calais for a fiver.

The Olau Line offers a duty-free trip from Sheerness, Kent, to Vlissingen, Holland, at £10.50-£13.50 per person, throwing in a £7 voucher to 'spend' in the duty-free shop.

Danish Seaways operates two mini-cruises to Esbjerg, one leaving daily from Harwich, the other three-times-weekly from Newcastle. You have two nights on board and an afternoon to wander round Esbjerg for as little as £8.50 per person. Food comes extra, and be warned: the Danish cost of living is one of the highest in the world.

separated spectators from cars; grandstands were sited away from dangerous corners. It was clinically safe . . . and it went broke as spectators stayed away.

'You can watch a serious accident happen, build elaborate precautions to cope with the next, and it will never happen,' says Peter Gaydon, managing director of Britain's newest spectacular circuit, Donington Park. 'No two motor racing accidents are the same. That's why it's so difficult to make a circuit safe.'

Cars are built as strongly as possible. Protective cages surround the driver's feet in Formula 1 single-seaters; roll

hoops protect his head when he's belted in by a six-strap harness. An on-board fire extinguisher, activated by a button or a sophisticated heat sensor, will feed pressurised powder into the engine bay and the cockpit.

Predictably, the drivers themselves take the greatest precautions. They wear fireproof suits, and have underwear, boots and gloves to match. The all-enveloping helmet plugs them into an air supply and houses an audio system that links them to their team managers.

Fire is the greatest enemy. Not so much because it burns flesh, but because it burns up oxygen,

leaving the driver with nothing to breathe: a canister of air in his Ferrari undoubtedly saved Niki Lauda in the fiery crash that took him so close to death at Nurburgring in 1976.

Drivers also have their own code of safety, and can be their own enforcers, as was proved when the GP men turned on one of their own and banned him from one of last year's GP races. The drivers simply issued an edict to the organisers of the grand prix: If this man races, we don't.

Top British driver John Watson explains and justifies the drivers' action: 'Safety is being able to judge 2in of placement at 180

mph. Nobody but a driver can make that judgement. We know who behaves dangerously—not the people at the side of the track.'

Motor racing can never be completely safe so long as it consists of open-top, open-wheel cars circulating in competition at 180mph. So long as internal combustion engines use petrol, there will always be the risk of fire. There will always be mechanical and human failure.

Safety in motor racing is a matter of *minimising* the incidents, not eliminating them. And the truth is that the public doesn't want it any other way.

NICK BRITTAN



WORLD-WIDE

Hot air

THE STEAM car is one of those will-o'-the-wisp ideas that surfaces every few years, then vanishes again as yet another engineer's hopes come to grief. In the early days of motoring, the Stanley Steamer sold well, but rapid development of the petrol engine soon showed up the disadvantages of **steam power**.

Since then, many others have tried, and now an Australian inventor thinks that he may have licked the steam car's problems without spoiling any of its advantages—such as low exhaust-emission, silence and smooth power enough to eliminate the need for a gearbox. The Australian government shares his optimism, apparently, and has granted him nearly £100,000 for development.

Due out in April are a series of **compact saloons** from General Motors in the United States... with full European specifications. That means such features—unheard of, for Detroit, even a few years ago—as transverse engines, front-wheel drive and independent rear suspension. But the familiar American extras—power steering, air-conditioning et al—will also be available.

Volkswagen still believes in having a **convertible** in the range, and has the sales figures for the old Beetle Cabriolet to prove that it's right. Now a replacement is on the stocks—a neat conversion of the Golf, with a Targa-style hoop that stays in place when you put the hood down.

The Golf Cabriolet, like its open Beetle predecessor, will be produced by Karmann, probably at a rate of around 10,000 a year.

Australia is the **Soviets'** next market: 30,000 cars a year.

Honda has decided to call its forthcoming sports coupé the **Prelude**, somewhat to the chagrin of salesmen who can imagine critics being fearfully witty about a name that suggests that something better is coming later!

There may be confusion, too, over the Prelude's odd combined speedo/rev counter, with two clock-style needles on a single dial. Will drivers have to puzzle-out whether they are doing 70mph at 5000rpm, or whether it's ten past two?

CHRIS WEBB

THE DOCTOR had taken a carefully prescribed dose of antihistamine for his hay fever. Later, he found himself driving straight for a traffic island, oblivious of the danger and laughing his head off...

Dr Andrew Raffle, chairman of the Medical Commission on Accident Prevention transport committee, told the story when he addressed a Pharmaceutical Society symposium on drugs and driving in 1977. And it illustrates neatly the road danger lurking in the growing mountain of medicine being prescribed in our drug-orientated society. A danger largely unacknowledged simply because few motorists know about the side-effects of the pills they take by the million.

Dr John Clarke, until recently honorary secretary of the Police Surgeons Association, tells DRIVE: 'Surveys have shown that about 15% of drivers on the road are under the influence of drugs at any given time. That means every sixth car. Night-time sedation and tranquillisers are turning drivers into potential killers.'

The figure comes as no surprise. A decade ago, this magazine carried out the first-ever survey to discover just how many British motorists might be driving with drugs in their system. Out of 945 drivers interviewed, 130 (14%) admitted they had taken medicine in the previous 24 hours.

The results of DRIVE's survey have for 10 years been quoted at international conferences. But what action has been taken? The dispiriting answer, according to DRIVE's latest enquiries, is: Not much. Nonetheless, there are encouraging signs of greater *awareness* of the dangers, and three moves are afoot.

1 An extensive study of the relationship between drugs and driving is being mounted by the government's Transport and Road Research Laboratory at Crowthorne, Berkshire, involving interviews with 2000 drivers, half of whom have experienced accidents.

2 In tandem with this, the Department of Clinical Pharmacology at Oxford University is investigating which drugs are associated with greater or lesser risks.

3 And the Department of Health and Social Security has called together a working party representing the British Medical Association, the British Dental Association, the Pharmaceutical Society, the nursing profession, community health councils and the pharmaceutical industry to discuss the level of information about medical prescriptions given to the public.

But it will be some while before the full benefits of these studies reach drivers. In the meantime, many will be ploughing their way through that medicine mountain: in 1975 (the latest year for which figures are available), more than 50 million National Health Service prescriptions for sleeping pills, tranquillisers, anti-depressants, antihistamines and stimulants were issued in England alone.

Ironically, in that same year, the *British Medical Journal* carried a solemn warning from Dr William Reilly, a GP in Telford,

Shropshire, about drugs and driving. Since the introduction of the breath-test, he wrote, police seem to have forgotten the existence of drugged drivers, particularly when the drugs are prescribed. He added: 'Drugs to them, in all likelihood, mean heroin, cannabis or the amphetamines, and a well-dressed woman driving a family car would hardly fit their picture of a drug addict...'

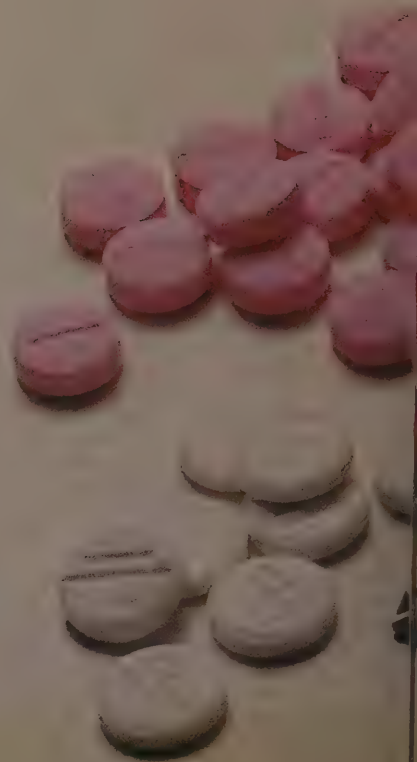
Case-histories illustrated his point. One woman, discharged from a mental hospital, having been prescribed five different drugs affecting the central nervous system, drove to his surgery and arrived in an obviously drugged state. Despite his warning, she insisted on driving home.

A middle-aged man under sedation ran his car off the road and hit a telegraph pole. In hospital, his dazed condition was thought to have been caused by concussion. In fact, it was due to sedation.

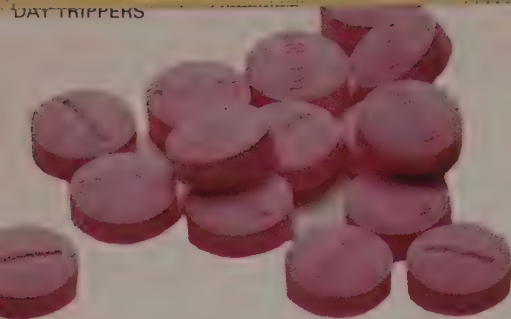
A woman under sedation, stopped twice by police because of her erratic driving, was breath-tested with negative results. But Dr Reilly saw her getting out of her car, barely able to articulate and standing erect only with difficulty. He wrote: 'I doubt if it occurred to the policemen who stopped her that she might be drugged.'

He concluded: 'As one who has been

Daytrippers one-way drivers, yeah?







to that are patients' varying needs for medication, and the diversity of personal idiosyncrasy, illustrated by my colleague who drove at that traffic island after taking antihistamines.

'A few decades ago, we were pretty sure that alcohol impaired the capacity to drive, but we had no hard evidence to prove it. We are now in much the same situation with drugs. We believe that they can affect drivers adversely, but have no scientific proof gained from experience on the road. Gathering that proof will take time, but at least we know the techniques from our experience with alcohol.'

Today's maximum blood/alcohol level was agreed after assessments of driving performance in experimental conditions had been complemented by studies in which the accident-involvement of drivers with various blood/alcohol counts was compared with control samples. The largest of these was conducted in the US by the department of police administration at Indiana University, which compared a group of 5985 drivers who had been in accidents in Grand Rapids, Michigan, with a group of 7590 drivers selected from the city's traffic in 1962-1963.

The TRRL study of 2000 British motorists drawn from the electoral register will be, in effect, a similar operation to provide hard information about drugs and driving. *But why, again, has it taken so long to mount, when the potential danger is so clear?*

The answer is that, until recently, it has not been a practical proposition because methods of analysing drugs in the blood simply were not good enough. But, in the last two years—and, with some drugs, in the last 12 months—substantial progress has been made.

Dr Anthony Moffat, head of the drugs and toxicology division at the Home Office Central Research Establishment, Aldermaston, Berkshire, says: 'We can now test for most drugs that might impair driving, using the blood sample taken in accordance with the Road Traffic Act.'

'We can do so without knowing what drug is suspected, though that should rarely be the case. A police surgeon should ask a suspect driver whether he has been taking any medication, and there should be other leads, such as his behaviour—or a tablet bottle in his pocket.'

'Having identified the drug, it is a simple extension of the exercise to determine its level in the blood. But that does not mean we can state the extent—if any—to which it impairs driving. To establish a danger level will involve epidemiological studies on the Grand Rapids scale...'

'The problem is much more complex than that of alcohol because the relationship between drug level and driving performance is likely to differ widely from drug to drug. Someone obviously intoxicated by barbiturates, for example, may register a low level in his blood. Cannabis, on the other hand, remains in the urine for some while after its effect has worn off. Analysis would reveal it, but a driver's

efficiency may be impaired no longer.'

Cannabis raises special problems, not merely because it is illegal but because its strength varies considerably. A recent study at Surrey University, in collaboration with the Home Office's Aldermaston team, has revealed that 10 out of 54 drivers and 12 motorcyclists killed in accidents over an 18-month period had cannabis in their blood. But Professor Vincent Marks, whose Surrey team has produced the first sophisticated method of analysing cannabis in the blood, warns that the figures must be treated with considerable caution.

He says: 'The only real conclusion we can draw from them is that the victims had cannabis in their blood. Whether it impaired their driving is a matter for conjecture. But it is a cause for concern because cannabis is now so widely used.'

It is a view that surely reinforces the need for further investigation of the relationship between drugs and driving.

Among aspects to be covered by the TRRL in its survey of 2000 drivers are environmental conditions at the time of the accident; the drivers' experience and accident records; drug and alcohol consumption prior to the accident; physical disabilities, including eyesight, hearing, illness and fatigue; and smoking.

Barbara Sabey, head of the TRRL's accident investigation division, tells DRIVE: 'I doubt whether our current studies could lead to legislation governing unacceptable levels for particular drugs; the nature of the problem is very different to that of alcohol. But we hope that they will provide the medical profession with valuable information about the dangers of driving with the drugs that the studies identify.'

It should also provide badly-needed armour for the motorist, who is a bewildered gladiator in this medico-legal field.

Broadly speaking, the law concerning drugs and driving is that which existed for alcohol before the 1967 introduction of the breath-test: driving 'under the influence of a drug' is an offence under Section 5 of the Road Traffic Act 1972, normally earning disqualification for 12 months.

If a driver gives a negative alcohol test, a police officer may consider whether he or she is ill or impaired by drugs. A police surgeon can ask for a blood sample, and a refusal to give it, while not an offence, may be used in evidence by the prosecution. Analysis of the sample may establish the presence of a drug believed liable to impair driving ability, but any such evidence would need to be supported by police and medical evidence.

Such cases are rare. The 1975 Blennerhassett Report on drinking and driving stated: 'Although drugs account for perhaps 100 cases detected each year, as compared with more than 50,000 of driving with excess blood-alcohol, impairment by them is unlikely to be as rare as this disparity would imply. The reason is that proof of this offence is even harder than proving unfitness through alcohol was before 1967.'

The report added that standard routine

both a driver and a prescriber for many years, it is my belief that a great many road accidents happen as the result of impaired judgement due to drugs. *How many, it would be difficult to estimate; but much more, I am sure, than the police or the general public realise.*

'How this hazard can be eliminated, I do not know. But I am equally sure that it is a growing hazard and that the problem is one that must be tackled sooner or later.'

Nothing has happened in the three years since Dr Reilly wrote that article to make him change his mind. He says, today: 'I've no reason to believe that the situation has improved. In fact, it probably has deteriorated as more people are driving cars and more are taking drugs.'

Why has there been delay in offering the public protection from the side-effects of so much medication? If international sporting bodies can identify drugs so swiftly, and act even more swiftly, why have we not moved, long before now, first to quantify the problem that appears to exist on the road, and then to combat it?

Professor Arnold Beckett, who has made extensive studies of drugs and driving and who is also a member of the International Olympic Committee's medical commission, tells DRIVE: 'In sport, there are forbidden drugs. We are concerned solely with testing for their presence, not with whether or not they affect performance or judgement. Any legislation under the Road Traffic Act would have to take those elements into consideration, but it will be difficult for any nation, at least in the foreseeable future, to have a system of testing blood levels that could be enforced in law and at the same time be fair...'

It is all a question of *positive proof*. To date, most studies of the effects of drugs on driving ability have relied on laboratory investigation, driving simulators and 'gymkhana' tests—vehicle-handling in controlled, traffic-free conditions. They do not allow for tiredness, bad road surfaces, weather or traffic conditions, and most of those taking part have used drugs for the purposes of the tests, not for therapy. In reality, of course, a sick person might drive even worse without medicine; a highly tense person might drive more efficiently with tranquillisers.

Dr Raffle says: 'The problem is one of sheer size. There is the number of people involved and their widely differing types of driving; the large number of drugs that might affect driving performance; and a virtual lack of data about the relationship between drugs and road accidents. Added

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INDEX

Cheap frills

MOTORISTS are keeping an ever tighter hold on the purse strings—a trend highlighted by a marked drop in the amount spent on accessories during the 12-month period to last August. According to this latest DRIVE Index of Motoring Costs, expenditure on such 'frivolities' as cassette players, foglamps, wheel gloves and the like is down 14% on the Index's October 1973 launch.

The drop also contributes to the fall of one point in the overall Index figure, to 191, which compares with the more dramatic fall of two points recorded four months ago—the first in the history of the table.

Lower petrol costs have played a decisive part in these somewhat surprising developments: motorists spent £2.68 less on petrol in the year than they did in the corresponding period two months ago. Now down to 202 points, the Index on petrol is back at the level of nearly two years ago, and though it is still nearly double the October 1973 figure, it has dropped 11 points below the peak of 213 reached in the tables published in the first two issues of 1978.

Oil and servicing/repair costs appear to have stabilised at the levels reached in the last Index, but insurance costs continue to increase, and the figure is now £2.83 higher at £50.51.

In July–August alone, the increase was half as much again as the total in the same two months of 1977. Between August and September 1977, it increased by a third, but this rise, though reflected in the *total* Index points, right, has been more than outweighed by cuts in petrol prices.

Index indicators

Ford's Escort 1300 remains the most economical car to run, at 4.99p per mile, followed by Datsun's Cherry/Sunny at 5.09p and BL's Allegro at 5.15p. The Austin-Morris Princess has the highest cost for servicing and repairs, at £31.31, followed by the Vauxhall Victor 1800/2300 at £24.59 and the Ford Granada/Consul at £23.11.

Although Japanese cars recorded the cheapest cost-per-mile at 5.89p, and covered the most miles—886 in a month—British cars as a whole came close-second in costs, and covered an average 42 fewer miles.

COST OF MOTORING: September 1977–August 1978

INDEX Oct 1973 = 100	104	184	202	110	193	86	168	204	191
MONTH-BY-MONTH ANALYSES (all cars) AND ENGINE RATING ANALYSES (post-1968 cars)			Petrol	Oil	Servicing repairs	Accessories	Insurance	Other costs	TOTAL
September 1977	823	5.75	24.39	0.70	10.86	0.15	4.09	7.13	47.32
October 1977	738	6.60	24.10	1.63	11.08	0.44	3.97	7.49	48.70
November 1977	778	6.04	24.26	1.13	9.04	0.32	4.06	8.17	46.98
December 1977	719	5.72	22.60	0.65	6.64	0.18	4.11	6.92	41.11
January 1978	616	7.17	21.07	0.64	11.23	0.61	3.99	6.63	44.16
February 1978	738	6.17	21.26	0.85	11.80	0.81	4.24	6.59	45.55
March 1978	674	6.69	21.47	0.70	11.33	0.76	4.22	6.59	45.08
April 1978	757	6.47	23.85	0.93	10.86	0.40	4.17	8.78	48.99
May 1978	762	7.82	24.86	0.63	21.56	1.18	4.33	7.05	59.62
June 1978	852	5.84	24.38	0.81	11.88	1.01	4.41	7.28	49.77
July 1978	813	6.55	24.92	0.89	14.19	0.31	4.41	8.50	53.22
August 1978	872	5.91	25.64	0.78	10.42	1.03	4.51	9.13	51.52
TOTAL (for year)	762	6.36	282.80	10.34	140.89	7.20	50.51	90.26	582.02
–900cc	537	5.69	13.45	0.51	5.95	1.00	4.01	5.68	30.59
901–1100cc	709	5.95	19.04	0.59	10.91	0.45	4.10	7.10	42.20
1101–1300cc	791	5.78	22.32	0.83	9.96	0.59	4.26	7.76	45.73
1301–1500cc	726	6.88	24.00	0.72	11.72	0.54	4.45	8.51	49.94
1501–1700cc	1018	5.96	31.71	0.65	14.89	0.88	4.81	7.67	60.62
1701cc+	982	6.40	33.57	0.77	14.05	0.62	5.44	8.41	62.87
MODEL-BY-MODEL ANALYSES—post-1968 cars									
Chrysler Imp	454	5.54	13.44	1.04	1.78	0.00	3.60	5.31	25.16
Avenger	721	7.14	24.69	0.93	15.40	0.11	4.02	6.31	51.47
Hunter 1500/1750	687	7.88	24.42	0.62	6.14	1.08	4.48	17.36	54.09
Datsun Cherry/Sunny	848	5.09	20.95	0.57	10.93	0.00	4.81	5.89	43.14
Fiat 128/124	862	6.68	22.03	0.45	14.77	0.00	4.75	15.58	57.59
500/127	479	7.40	12.50	0.18	11.78	0.00	4.46	6.56	35.49
Ford Escort 1100/Popular	884	5.63	26.06	0.51	9.25	1.04	4.16	8.76	49.78
Escort 1300	972	4.99	24.88	0.54	10.34	0.92	4.39	7.44	48.51
Cortina 1300	855	5.43	27.98	0.13	7.56	0.00	4.26	6.49	46.43
Cortina 1600	1103	5.76	34.72	0.70	14.26	1.39	4.44	8.09	63.59
Cortina 2000	966	6.20	35.50	0.74	10.80	0.25	5.46	7.18	59.93
Capri 1600	931	5.96	32.94	0.72	6.29	0.21	5.40	9.95	55.50
Granada/Consul	1347	6.92	54.54	1.68	23.11	0.00	5.67	8.22	93.22
Leyland Mini	597	5.92	15.20	0.59	8.99	0.36	4.15	6.01	35.30
1100/1300	523	7.25	16.33	1.04	7.93	2.40	3.65	6.59	37.95
Allegro	798	5.15	23.12	2.65	4.02	0.17	4.25	6.88	41.09
Maxi 1500/1750	788	6.50	24.87	0.71	14.71	0.00	4.25	6.74	51.27
Marina 1300	913	5.61	22.68	0.64	14.18	0.59	3.84	9.30	51.23
Marina 1800	982	6.64	28.83	0.45	19.70	0.58	4.75	10.89	65.20
Princess 1800/2200	741	9.22	25.23	1.17	31.31	0.03	4.49	6.04	68.28
Rover 2000/3500	926	6.92	33.04	0.48	15.63	0.34	5.58	8.98	64.06
Simca 1000/1100	633	7.27	20.58	0.26	14.87	0.23	3.97	6.09	46.00
Triumph Toledo/Dolomite	745	6.24	21.98	0.49	12.33	0.12	4.76	6.78	46.44
2000/PI	804	5.97	31.32	0.47	9.76	1.52	5.28	7.69	56.04
Vauxhall Viva	737	5.89	21.45	0.84	9.69	0.56	3.93	6.99	43.47
Victor 1800/2300	755	9.33	33.69	1.62	24.59	0.00	4.32	6.24	70.46
VW Beetle	622	6.35	19.40	0.54	8.84	0.01	3.88	6.86	39.52
All Chrysler UK	731	6.84	23.76	0.84	10.88	0.83	4.19	9.51	50.01
Ford	1000	5.71	31.85	0.64	11.11	0.75	4.66	8.04	57.06
Leyland	764	6.37	23.30	0.86	12.28	0.51	4.45	7.28	48.67
Vauxhall	807	6.04	24.66	0.91	11.72	0.39	4.17	6.95	48.80
All British	844	6.07	26.13	0.80	11.56	0.60	4.45	7.66	51.21
All Fiat	726	6.83	19.06	0.42	14.09	0.38	4.90	10.75	49.59
Renault	826	5.49	21.24	0.33	10.03	1.41	4.62	7.69	45.33
Simca	622	8.71	21.85	0.41	21.51	0.17	4.10	6.14	54.18
Volvo	1077	5.50	38.79	0.61	3.58	2.15	6.23	7.89	59.25
All French	803	6.12	22.73	0.33	12.20	0.83	4.67	8.32	49.10
Italian	739	6.71	20.34	0.43	12.89	0.33	5.23	10.31	49.53
Japanese	886	5.89	24.73	0.72	14.10	0.19	5.25	7.23	52.21
W German	852	6.41	25.90	0.46	14.40	1.43	5.12	7.27	54.58
All Foreign	817	6.18	23.99	0.52	12.20	0.74	5.02	7.99	50.47
Average monthly costs (£) excluding depreciation									
Cost per mile (pence)									
Average monthly mileage									

Roll up, roll up! Three rides for less than £2000! Yes, sir, it seems a lot, but Citroen, Skoda and Fiat are virtually the only operators offering anything at that price—the Dyane, Estelle 105L Plus and the 126 de Ville, or their close stablemates. We know it's not exactly the Big Wheel, but you can still have thrills—and ills—for your money. Here is DRIVE's fair report

Citroen Dyane

Price £1989 On the road £2105

UPS, DOWNS, SWINGS AND ROUNDABOUTS

Tell the owner of a Citroen Dyane 6 that his car looks like a dustbin on wheels, and he'll probably agree with you . . . while thinking to himself that he has the nearest thing to perfection.

While in France the cheaper, even uglier 2CV has sold in millions to drivers who couldn't care less about their car so long as it goes, in Britain, the basic Citroen has inverted snob-appeal.

But there's more to a Dyane than meets the eye. There's also a magic ingredient called fun, thanks to tenacious roadholding and roll angles that give passengers and following-drivers mild hysterics. Why, with rollerskates on its door-handles, it could probably do a U-turn flat out.

How it goes

Buried in the Dyane's nose is a power unit that would look more at home on a lawnmower. With only 602cc to play with, the power output is a surprisingly good 32bhp, making it (according to Citroen) slightly quicker off the mark than the 2CV.

Everything about the Dyane is unconventional, and starting is downright awkward. Once rolling, though, the car ticks over reliably and pulls smoothly, other than when pottering around town—a grumbling affair.

Despite its economy image, the Dyane demands 4-star petrol; but filling the jokey 5½gal tank won't break the bank, and even flat out, at a rip-roaring 73mph, the car manages a not-unreasonable 31½mpg. Overall, DRIVE's Dyane averaged 47mpg.

The quirky gear change—that facia-mounted push-me/pull-you walking stick—has a top gear that's difficult to locate and a bottom with no detectable synchromesh, producing frequent protesting, crunchy noises; and it's not difficult to engage reverse instead of first, once familiarity has bred a little contempt.

A 0-60mph 'dash' of 26.9sec sounds incredibly backward for a current-model car, but the Dyane isn't often left behind at the traffic lights.

Top-gear 30-50mph acceleration in 20.5sec, explains why some Dyane drivers pick . . . well, 'unusual' passing points.

Noise, we suspect, cannot worry many owners, although they have



to shout at passengers while driving on the open road. Around town, low-speed vibrations can prove offensive.

This being so, it may seem odd to say that the Dyane is at its most impressive bowling along a pot-holed track. All the same, people who can't stomach an ocean cruise should beware: the Dyane bounces up-and-down and side-to-side at the same time and in slow motion, and the wheels get to look like yo-yos.

The penalty for the gymnastic ride is plain to see: just follow a Dyane round a brisk tight corner and watch its French roll. The limits are set by the strength of the driver's wrists. It doesn't add up to good handling in, say, the Alfasud manner—but you have to admit it can be enormous fun.

There is, in fact—because the power output is so feeble—more grip than the car will ever need, even in the wet, and, if your nerve gives out, you need only lift the throttle to restore equilibrium.

The brake pedal needed a much heftier stomp than the last Dyane tested by the AA, in 1975, to produce a best stop of 95%, but the system manages to feel reassuring, with even progression through the range. Heat-fade never becomes alarming, and DRIVE's water test did prove more difficult than usual: with such good ground clearance, you need virtually a swimming pool to wet the discs.

Although a 1-in-3 hill presents no handbrake worries, a restart is in fact out of the question with such little power. You'll just have to roll back down.

Inside story

One tester looked agog at the Citroen's botched-up, stuck-on trim, with nasties such as screw points protruding into the passenger area, and wondered how the French can get away with it. Would anyone, he asked, buy even a Mini in such a state?

Nonetheless, it's surprising how comfortable the Dyane is. Our

only niggle is with the driver's seat back—it's too erect, and cries out for a reclining mechanism. A silly but effective idea—a peg in a hole—allows the seat to be moved back far enough to accommodate the longest legs, but the snag is that, with the driving seat pushed back, there is no longer room enough to fold the back seat over and use the car's estate facility.

The Dyane's instrument pack was designed for lefthand-drive cars and certainly suffers in the UK market change-round. The wiper motor, for instance, obscures part of the speedometer, and the three pushbuttons—for wipers, hazard-flashers and brake-test light—on the facia-top are a longish stretch away.

There are two column stalks—on the right for lights and horn, left for indicators which don't flash inside the car and don't cancel. At night, a headlamp main-beam warning light is badly needed, too.

The tailgate opens to reveal a large boot, and, with the spare wheel up front under the bonnet, all its space is usable. Fold down the rear seat, and the Dyane becomes a very roomy load-carrier indeed.

The back seat is comfortable: passengers don't have to struggle for kneeroom and getting in and out is easy. A canopy stretching back from the top of the back seat hides luggage from sight, but can be removed (with a little fiddling) to provide room for the family dog. Anyone needing more room—for carrying a ladder, for instance—can simply stick it up through the standard, fold-back sunshine roof . . .

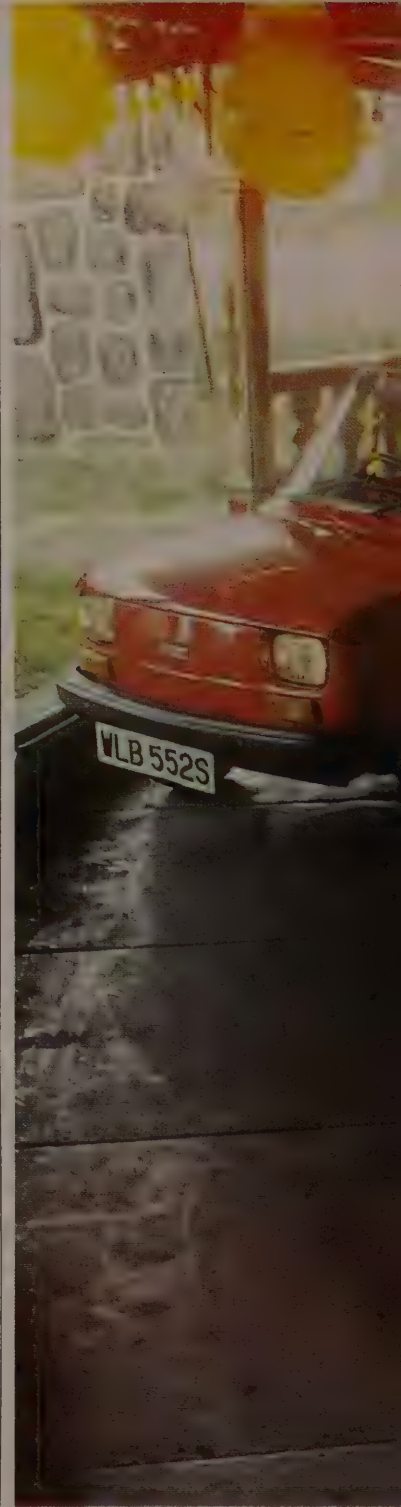
Pay £7000 for one German luxury car that we know, and the ventilation system won't work half as well as the Citroen's cheap little affair. Output through the ingeniously simple ventilation grilles is tremendous. The snag is that they can be a source of noise, but it's unlikely to be noticed above the rest of the din.

The Dyane has sliding windows that allow a good throughflow of air without causing draughts and don't steal room from inside.

The heater is as simple—or crude, depending on your viewpoint—as the super ventilation system. It's worked by just one slider control, and, while the output won't be much good for roasting the family joint, it's good enough for thawing people. However, winter demisting can be a big problem, and there's no heated rear screen.

Brakes and steering are what the Dyane owner relies on to keep him in one piece; but if something solid gets in his path, he may wish to be in the other car.

A shunt in the side does not bear thinking about, and roll-



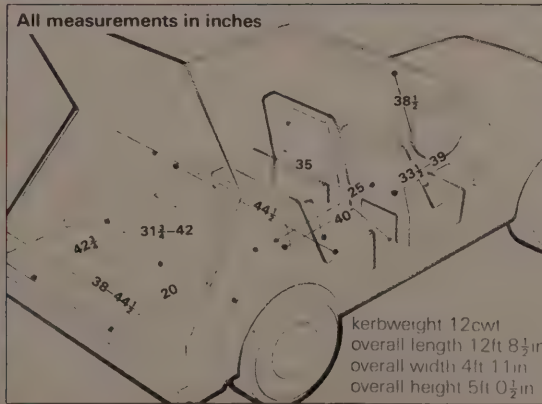
over protection looks terrible—or, rather, it doesn't look at all! Door releases inside the car may be hard to find, yet the rear doors are far from child-proof—a serious omission in a family car. And, while the front seats are more securely anchored than they appear to be, the rear seat has a flimsy fastening that may not stand up to violent impact.

Seatbelts are now the inertia-reel type—an overdue change for the better, allowing drivers to reach the handbrake—and are both comfortable and very efficient.



Dodge 'em?

Cheap fares...
but not all fun



Poor visibility of the car's extremities can mean owners learn the hard way, but at least it's the sort of car where a dent is not the end of the world. French drivers are surely convinced that battle-scars merely add to the car's character.

Living together

If a muscular cat walked over the Dyane's bonnet, the footprints it left might be permanent; at least, the Dyane looks to be as flimsy as that. Nevertheless, the car doesn't have a reputation for falling to bits, and DRIVE's test vehicle

appeared to be very well painted. Seams and edges suffer too readily from rust in the longer term. Underneath, the latest cars have a well-applied petroleum-wax coating which should be more effective than the former light wax spray.

Wings are easy to unbolt and owners ought perhaps to clean out their nasty mudtraps twice yearly.

Opening the bonnet can give a DIY owner delayed shock. Jobs look easy to tackle until you try them, and, apart from routine topping-up chores, many owners will leave things to their nearest Citroen dealer.

The fabric roof is difficult to keep

smart—perhaps Citroen has an answer to that one—and you can cut your hands on the sharp-edged bumpers. But cleaning the rest of the car is easy: thick rubber floor mats are practical and hard-wearing and, if the fabric seats don't look up to the job, there's a pvc alternative.

Good secondhand Dyanes are thin on the ground and are much sought-after by those wanting something cheap but different. Look after one, and it certainly won't turn out to be a millstone round your neck. The insurance companies' computers have nothing against the car's risk potential—perhaps more of a

tribute to its roadholding—and slot it into the cheapest Group 1.

There was a time when the Dyane/2CV was regarded by the British as a joke—a car completely out of step with the rest of the motoring world. But, while the British guffawed, millions of Frenchmen went out and bought the thing.

But times change, and there can't be many anachronisms left with the ability to average almost 50mpg in such style. Like all Citroens, the Dyane needs time to win a driver's affections, but, once hooked, his loyalty is likely to be as unswerving as his little car at full cry down the autoroute.

Skoda Estelle 105L Plus

Price £1899 On the road £2019



ONCE MORE—BUT STILL WITHOUT FEELING

New car designs from the Eastern bloc are not, it is true, usually greeted with ready praise by Western motoring writers, but the chorus of criticism that met Skoda's Estelle on its 1977 debut was reminiscent of newspaper reviews for a bad West End play. And the AA was in there with the rest of them: 'Crude road-going manners' and 'lurking treachery in the wet' were phrases used in our 1977 road test report.

To its credit, Skoda didn't merely slink away to lick its wounds: it asked for—and received—the consultative help of such critics as the AA's chief engineer to tame the Estelle's wildest excesses with a cluster of subtle modifications.

Certainly, this bargain-basement transport is now a much safer and more comfortable proposition. It is, however, no secret that much more drastic changes for the 'Estelle are on the way: the radiator has already moved from back to front, where it will one day be joined by the engine.

In the meantime, the 105L Plus is a lot of car for comparatively little money, and even the 'luxury' of Skoda's top-of-the-range 120LS won't mark you down as a bloated capitalist. DRIVE gave the former

another chance, then sampled the bigger-engined latter.

On the road

The Estelle is still hardly the car to thrill and flatter the average driver. Performance isn't startling, for 46bhp doesn't go very far when there's 17½cwt of family car to propel. Yet it still manages to emerge as the liveliest of this test trio. There are no starting problems, so long as the accelerator is untouched for 10sec or so after the engine fires—otherwise, like the Fiat, it tends to gulp and stop dead. Low-speed flexibility is good, with top gear pulling happily from around 20mph.

The driving position and control layout is businesslike and attractive: you don't have to contort yourself at the wheel, as in some small cars.

Once under way, however, you discover that things aren't all sweetness. There's a sticky and 'sudden' accelerator action and a clingy, obstinate gear change, especially into the lower ratios. The muscle-building properties of the heavy clutch are more than matched by those of the steering, which compounds its sin by being sticky, too, in minor correction. The steering is certainly too high-

geared, and the suspension changes have served to make its weight problem worse.

A car conducts a two-way relationship—with its driver and with the road surface. The revised Estelle still has problems in the first, but it certainly does better in the second. Gone is the wilful tail-swing in quite ordinary cornering, and directional stability on a windy day is much better, too.

True, you can get some oversteer if, after putting the boot in, you cut the throttle abruptly halfway round a wet bend. However, it all happens so much later, and with so little spite, that only the foolhardy could now get into trouble.

One outright improvement is in the braking. The addition of a servo pays dividends, especially in gentler check-braking, and our best stop of 95% really is quite remarkable for a rear-engined car with an unladen front boot. Fade is not a problem in any but the most arduous conditions, but complete recovery from a soaking takes longer than we'd like.

The car's ride is less turbulent in this latest form, and even shines over really broken-up surfaces—it doesn't jar occupants at any time. There is, however, still a lot of 'fuss over nothing': overslightly undulating surfaces and even basically good roads, it feels more perturbed than cars with more weight on the front wheels. Certainly, its best ride is 'on holiday' with a full boot.

Noise control is something else. Our test 105L had ear-splitting boom at 45–47mph that made all that came before seem silence by comparison, and it built up again between 60mph and 70mph.

Tyre noise, by comparison, is no problem, and, though there are odd body creaks and pronounced wind whistle from the door frames at cruising speeds, the engine note tends to obliterate all else.

There's little to choose between the degree of thirst of the Estelles, despite the disparity in engine size and performance. Comparisons give 1mpg difference overall—34mpg—in the 105L's favour. It

also gives better economy at 70mph by some 2¼mpg, but does 1mpg worse than the 120LS in suburbia—not the results we would have predicted. It is no surprise, however, to discover that either version is dipsomaniac by the 45-plus standards of the Dyane/Fiat 126.

Seven gallons is the most we got into the tank, even when the low-level lamp had been glowing resolutely for some miles. It fills to the brim easily and a somewhat unlovely locking cap is standard—though, because it doesn't fit flush, it runs the risk of being ripped off in a side-swipe impact.

Inside story

There's no denying the Estelle's showroom appeal. It's unquestionably a lot of car for the money. The standard of trim—even on the cheapest 105L—and the seats' comfort, with all their various permutations to accommodate the impedimenta of family life, are impressive, too. The driving seat gives reasonable support, with stiff but valuable rake adjusters.

It would do some British manufacturers no harm to copy Skoda's rear-seat example: it can be especially useful to fold down one side of the split seat back and have a family pet or carry-cot on the solid base beside the other rear passenger. Of course, a front offside-loading boot is no match for a 'proper' arrangement (and protecting the vulnerable paint on the wing is not the least of your worries). But the extra stowage space elsewhere helps to offset this disadvantage.

Legroom all round is good, and another rear-passenger perk is a supply of warm air to the rear footwells. The handbook's heater instructions are difficult to understand, but, by juggling with the centre and righthand slides, good temperature control can be achieved. The only absurdity is that air emerges from the front floor outlets at all times—unwelcome on merely fresh days, when you don't need heat but could do without cold. A 2-speed fan boosts the system.

Skoda has no heated rear windows on offer in its range, and the reasonable rear-extraction system cannot fully compensate for this.

The fascia symbols that denote telltale functions may at first cause some confusion, but the shape and feel of minor controls is pleasing. If only the major controls matched them...!

A squared-up shape allows the driver a good all-round view of his own car and the world outside. Headlamps are powerful, but any form of realignment means removing the front grille.

Steep gradients cause idling and restarting problems, but the door checks resist a 1-in-4 slope. The

wipers clear good arcs, and the driver's door mirror, now provided, is a great improvement.

The Estelle acquits itself quite well in our safety checks—items such as head restraints and a laminated windscreen are still unusual in domestic family saloons. Seatbelts are the non-retracting sort that do their job well but tend to fall out of the doors or get trampled on; no factory-fitted inertia-reel option is available. The roof interior is not adequately padded, and the front seats have spiteful metal edges.

Living together

This latest generation of Skodas appears to be more workmanlike than its predecessors and most other Eastern bloc cars that we have sampled.

The paintwork is thick and uniform: chrome plating looks to be of fair quality; and, although some of the dearer versions' other brightwork is bound to give the rust-bug a chance to breed, the 105L was mostly free from this.

Underneath, too, Skoda is working along the right lines, with flexible, pvc-coated protection on the floorpans and wheelarches. Sadly, obscure areas are skimpy.

Standard items such as rear mudflaps and rubber over-riders are also impressive, and, in typical

Eastern European fashion, a handy roll of tools is provided.

One new problem is that the revised wheel specification makes it well-nigh impossible to shut the spare-wheel cradle—slung under the front of the car—after a wheel change. And, contrary to Skoda's claim, you can drive off with the Estelle's jaw hanging on the road.

Skoda offers an unlimited-mileage warranty of 12 months' duration, and most of the main mechanical components are covered for a further year.

Most routine servicing—due every 6000 miles—could be tackled by an enthusiastic amateur: engine access is very good, with neat inspection plates

inside to check more-remote items. The interior trim seems particularly hard-wearing on the cheaper versions. The seats don't collect hairs.

Depreciation is steeper than on alternatives such as the Ford Popular or the Lada 1200, and it is the heaviest in this group comparison, too. Future prospects depend largely on how effectively Skoda can rejuvenate the Estelle's tarnished reputation.

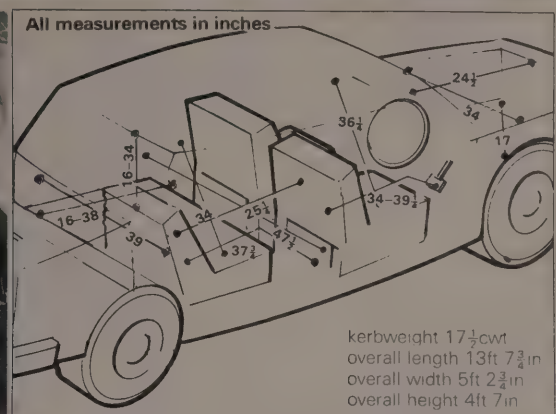
This also applies to its chances of more-favourable insurance terms, for some companies quote loadings on the model.

She's no beauty queen, but the Estelle looks a very comfortable

and well-endowed proposition at its current asking-price. Indeed, for those who always prefer new to used and who want a proper four-door saloon, with decent seating and a boot, the Estelle 105L is about the cheapest there is.

So far, her prospects have been sullied by those early, unforgivably bad road manners; but these are thankfully a thing of the past. Yet, unlike the Fiat 126, and especially the Citroen Dyane, the car's character seems devoid of any fun value.

Motoring in the Estelle is like watching black-and-white television or eating soya meat: it probably does you as much good . . . but it's not half as enjoyable.



Fiat 126 deVile

Price £1799 On the road £1925



BETTER WITH THE DE VILE WE KNOW?

In the early days of motoring, when cars were the playthings of the rich and the aristocratic, the idea of using just *one* car for all reasons was unheard of. For touring journeys, the wealthy automobilist would enjoy the mixed blessings of an open car; in town, he would need a de Ville.

Today, the town car is a very different proposition. It needs to be chic, but it also needs to be compact, nippy and economical. And the Fiat 126 deVile justifies its prestigious title because it is all of this.

The little car dates back to 1936,

when the Italian company produced the tiny 500cc Topolino—considered by the fashionable blades of the day to be a motoring joke. But thousands of miniature-minded motorists are still running round Europe in Fiat 500s and 126s. Who has the last laugh now?

How it goes

As befits a bee-sized car, the baby Fiat has its sting in its tail—a 652cc, twin-cylinder engine that bears more than a passing resemblance to the heart of the Fiat 500. The 500 was never an easy car to start, and the 126 isn't either.

Liberal applications of the floor-mounted choke seem to make little difference, and DRIVE's testers had trouble, whether the engine was fully warmed or not.

Even with the latest power unit, 126 owners will never become victims of motorway police cars. The test vehicle managed a howling 68mph, flat out on the test track. And, if you can stand the din, flat-out is also cruising speed.

Passing a 50mph lorry can be a work of art. But, in the city, a 0-30mph time of 7.1sec won't embarrass owners at the lights.

A conventional four-on-the-floor gear change makes it easy to stir the little 126 into action, but Fiat still economises by omitting to put synchromesh on first gear.

For all its problems, though, the 126 was still the best town car in our bunch . . . and who can complain about a town thirst of a gallon of 4-star every 42 miles—just 5mpg less than DRIVE's overall figure.

Both handling, and roadholding are reminiscent of a go-kart, and there simply isn't enough power to get into trouble. The tiny, well-padded steering wheel seems responsive, its only bad manners being a marked reluctance to self-centre, leaving drivers to twitch it back on course after every bend.

Rear-engine cars with swing-axes have, in the past, been noted for the treacherous way in which the engine can overtake the driver. But 126 owners are unlikely to

suffer any heart-stopping moments on that score: like any safe car should, the 126 runs gently wider as speed increases through a corner; a driver would have to be brutal, and on a wet road, to get the tail out of line.

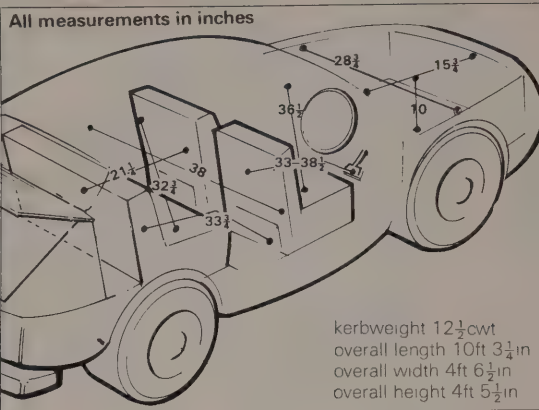
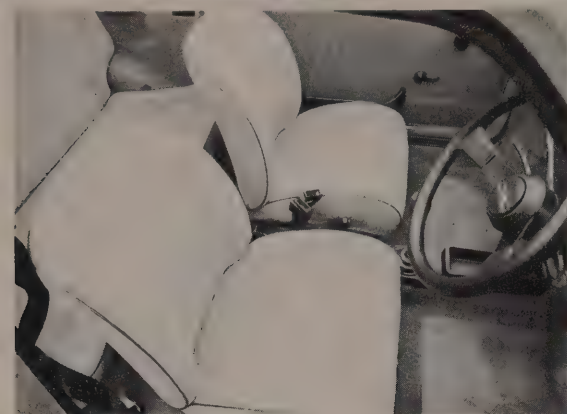
With such a short wheelbase, ride problems are legion. Over second-rate roads, the little car is always-fidgety; but it manages to tackle vicious bumps and ruts without the crash-bang that you might expect.

Undulations taken at speed make the front end quiver like a fiddler's elbow, and drivers learn that at times they have to take it easy.

It has taken BL till now to fit dual-circuit brakes on its Marina, so it's nice to find this valuable feature on such a tiny creature as the 126. With the introduction of the de Ville, the 126 was fitted with bigger drum brakes all round—as used on the rear wheels of the 128—to adapt it more to the demands of motoring in town traffic.

Despite all this 'sophistication', DRIVE's best stop of 85% didn't impress the professional testers, especially when it was achieved at a pedal pressure of 80lb. It's a problem that ought to be recognised by Fiat, especially as more than half of all 126 buyers are said to be women.

A 40% stop, using the handbrake only, is impressive, and the car sits happily on a 1-in-3 hill without rolling. Fade becomes apparent only in really severe use; and



a soaking has no effect on brake efficiency.

Inside story

The interior—floor, doors, side panels, even the dashboard—is covered in pile carpeting in an attempt to soften to the essentially practical 126. Carpets reduce noise intrusion, too, and the 126 needs all the help it can get there...

Straight ahead of the driver sits a speedometer in a binnacle. Gear-change points are usefully marked on the speedo's clock at 19, 32 and 49mph; but, although there is an odometer, it has no tenths marked, and there is no trip recorder.

A warning light lets you know when fuel is low, and others glow for main beam, oil pressure, no-charge and indicators. There is also an illuminated switch for the heated rear-screen—a welcome touch of luxury, compared with the Skoda and the Citroën; but why hasn't Fiat completed the effect with an electric screenwash?

Other controls are operated by the three-column-stalk set-up now used on all Fiats. The horn is sensibly in the middle of the steering wheel, where strangers to the car tend to look first. A hand throttle—a choke-like gadget on the fascia—can be used to drag the throttle pedal down to the floor and keep it there... which might be just the thing for a Rome-based 126, but it could lead to disaster in London.

The little car's pedal lay-out upset our professionals, and the angle of attack on the accelerator made one tester complain of an aching calf muscle. Pity, for the front seats are comfortable.

Fiat has worked hard to find legroom for everyone in the 126, and DRIVE's test reveals how it has been done: we normally take rear legroom measurements by moving the driver's seat back to allow 39in of legroom and measuring what is left, but the best we could manage was 38½in—just enough for Mr Average. So, if you *must* travel with more than two adults, it helps to be good friends!

There is quite a bit of room for oddments; including useful bins

in the front doors—remember when these were a feature of the Mini?—a tray in front of the gear lever, and a shelf below the rear window. The boot—the hole at the front end—will just about take a small suitcase and a few squashy bits and pieces. Sadly, the rear seat does not have the versatility of the Dyane's or the Skoda's.

Fiat decided that the best place for the 126 heater's master control was under the rear-seat cushion. (Where else?) Something has been done to improve comfort, but attempts to provide progressive heat control have not been successful.

You still have to suffer loud waffling noises that come in via the heater pipes, and—worse—the hot air is decidedly smelly.

The continuous-flow fresh-air system does not flow continuously enough, unless it is given help by opening the quarterlights or by flapping open the ear-like rear windows. But complaints about the ventilation system are brushed aside in one easy move: open the easy-to-operate sunshine roof—while stationary—and you can have excellent wind-in-the-hair driving.

With the rear engined 126, the answer to a crunch has to be metal beams inside the doors and under the floor, all of which adds weight. Protection against parking nudges consists of smart plastic bumpers and hefty, dog-leg-like rubber side-strips; but they won't help if the crunch is all-engulfing.

The de Ville's safety scoreboard is altogether a hit-and-miss affair, with, for example, energy-absorbing steering gear being countered by hinged but unanchored front seats that could easily tip the unbelted head-first through the non-laminated windscreen. There is no padding round the screen, either, but Fiat has made an honest effort to pad the rear-screen header-rail.

DRIVE likes the fuel-tank siting and the filler cap, but we found the seatbelt mounts more trouble than they were worth, allowing the belts to twist.

Living together

Fiat has made great strides in the

rust protection of its vehicles, and it's comforting to see that this thinking stretches uniformly from the top to the bottom of its range. Underneath the 126 de Ville is a thick layer of pvc sealant that at least *looks* reassuring. We had to look very hard to find skimpy areas. Criticism, therefore, is slight... but why not protect the painted sills with pvc, too? And surely, in this mechanised age, manufacturers could do something about unprotected wheelarch lips?

DRIVE found some body panels with paint nibs in evidence, but the car's appearance was generally pleasing. Thankfully, there is no chrome anywhere on it.

If we said that the DIY man would find the Fiat much easier to work on than the Citroën, we wouldn't be saying much. And there are annoyances—such as a fanbelt that has to be adjusted by laboriously removing spacers to take up slack. Access to most routine items is, however, surprisingly good, and drain-plugs are all easy to reach.

The handbook is not much help, but you do get encouragement in the shape of two spanners, a double-ended screwdriver, a plug spanner and a wheelbrace. The side-screw pillar jack is not the easiest gadget in the world to use, though.

Velour-cord-trimmed seats are reluctant to part company with dog hairs and such, but, with so little car to clean, keeping everything shining is an easy task for weekend washers.

The 126 should, on DRIVE's figures, be the cheapest of the test trio to own in terms of loss of value and depreciation, and insurance is in the lowest Group 1—a pointer to low accident-repair costs.

For sheer driving pleasure, the Fiat 126 de Ville gives you in town what a Dyane offers on the open road—a smile on your face, and the possibility of 50mpg motoring. In town, the ride and the noise level are acceptable, and you could park a pair of de Villes in the space of a Rolls-Royce.

And buy a score of them for the same money!

FIAT 126 DE VILLE

Rear engine: 652cc/2cyl, OHV (chain); one Weber single-venturi carb; 24bhp at 4500rpm
Rear drive: 4 gears; 13.9mph/1000rpm
Suspension: front—ind upper wishbones and transverse leaf spring; rear—swing axles with coil springs, semi-trailing arms
Steering: worm and roller, 3¼ turns/28½ft circle; 4J wheels, 135SR 12 radials
Brakes: drums all round

Parts/repairs (inc VAT)
clutch £29.52 (fitting 2.5hr)
exhaust £12.35 (0.9hr)
headlamp unit £9.84 (0.3hr)
front bumper £19.55 (0.2hr)
laminated windscreen £34.92 (0.8hr)
points £0.63 (0.2hr)
major service 12,000miles (av 2.25hr)

	per year	per mile
Running costs	£414	3.45p
Loss of value	£100	0.83p
Total depreciation	£399	3.32p
Insurance group	1	

CITROEN DYANE

Front engine: 602cc/2cyl, OHV (gears); one Solex twin-venturi carb; 32bhp at 5750rpm
Front drive: 4 gears; 13.2mph/1000rpm
Suspension: front—ind leading arms interconnected to rear by horizontal coil springs, dampers; rear—ind by trailing arms
Steering: rack and pinion, 3 turns/36½ft circle; 4J wheels, 125SR 15 radials
Brakes: inboard discs/drums

Parts/repairs (inc VAT)
clutch £29.07 (fitting 5.0hr)
exhaust £33.52 (2.5hr)
headlamp unit £12.26 (0.55hr)
front bumper £34.33 (0.55hr)
laminated windscreen £25.69 (2.4hr)
oil filter and points £4.62 (1.85hr)
major service 10,000 miles (av 3.2hr)

	per year	per mile
Running costs	£454.58	3.78p
Loss of value	£143	1.19p
Total depreciation	£487	4.06p
Insurance group	1	

SKODA ESTELLE 105L PLUS

Rear engine: 1046cc/4cyl, OHV (chain); one twin-venturi carb; 46bhp at 4800rpm
Rear drive: 4 gears; 17.6mph/1000rpm
Suspension: front—ind coil springs, wishbones, anti-roll bar; rear—ind swing axles, coil springs
Steering: worm and nut, 3 turns/34½ft circle; 5½J alloy wheels, 165SR 13 radials
Brakes: servoed discs front/drums rear

Parts/repairs (inc VAT)
clutch £28.36 (fitting 3.7hr)
exhaust £15.69 (0.9hr)
headlamp unit £12.50 (0.4hr)
front bumper (2 sections) £24.30 (0.4hr)
laminated windscreen £44.20 (1.2hr)
oil filter and points £1.74 (0.4hr)
major service 6000 miles (3.5hr)

	per year	per mile
Running costs	£562	4.68p
Loss of value	£147	1.23p
Total depreciation	£536	4.46p
Insurance group	3 (see text)	

THE RIVALS CLOCK IN

BL Mini 850

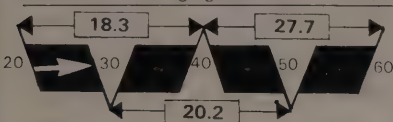
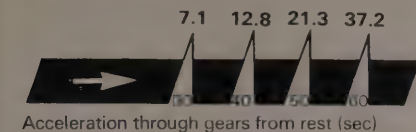
Ford Popular 1100

Polski 1500

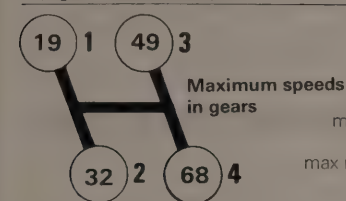
Renault 4

Datsun F11 2 dr L

PERFORMANCE

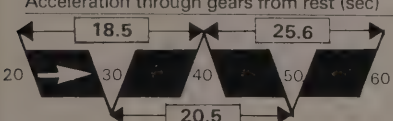
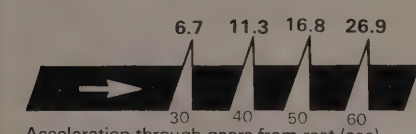


Top-gear acceleration (sec)

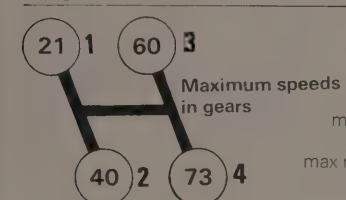


max engine speed used 5200rpm;
max in top 4900rpm;
standing 1/4 mile 24.7sec

PERFORMANCE

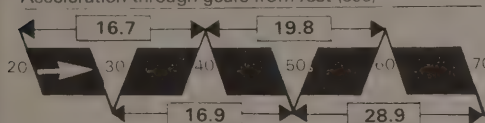
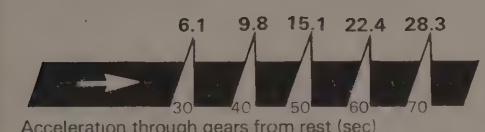


Top-gear acceleration (sec)

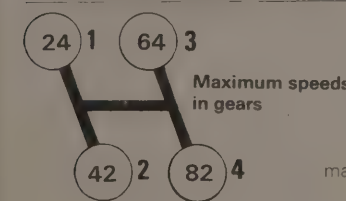


max engine speed used 6500rpm;
max in top 5600rpm;
standing 1/4 mile 23.7sec

PERFORMANCE

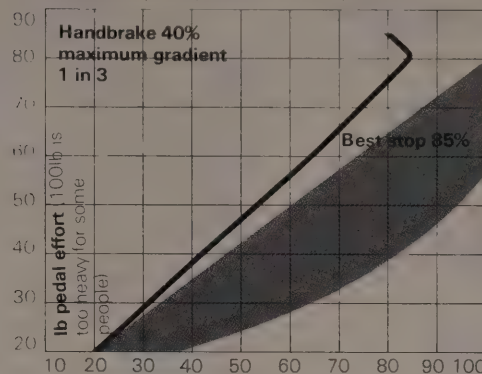


Top-gear acceleration (sec)



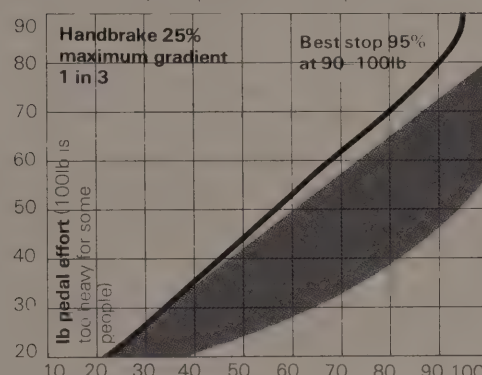
max engine speed used 5600rpm;
max in top 4900rpm;
standing 1/4 mile 22.8sec

BRAKES—pedal pressures and responses



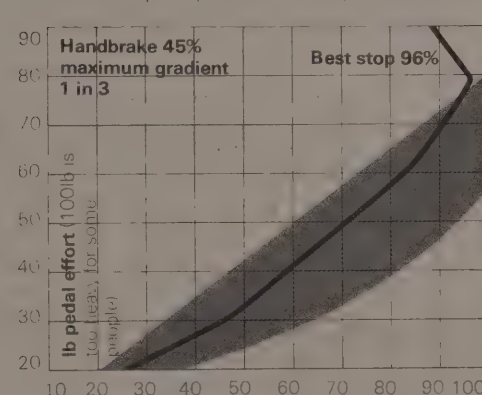
% efficiency (ideal car's braking performance falls within central zone—above, too heavy, below, too light)
Fade test pedal pressure needed for 75% stop (ideal car would show no variation)
63lb at start, **63lb** in constant use, **86lb** in severe use
Watersplash immediate recovery

BRAKES—pedal pressures and responses



% efficiency (ideal car's braking performance falls within central zone—above, too heavy, below, too light)
Fade test pedal pressure needed for 75% stop (ideal car would show no variation)
72lb at start, **72lb** in constant use, **90lb** in severe use
Watersplash 105lb at first, 7 stops to recover

BRAKES—pedal pressures and responses



% efficiency (ideal car's braking performance falls within central zone—above, too heavy, below, too light)
Fade test pedal pressure needed for 75% stop (ideal car would show no variation)
47lb at start, **53lb** in constant use, **57lb** in severe use
Watersplash 65lb at first, 7 stops to recover

FUEL 4-star/97 octane min
overall consumption 47mpg
effective tank range 180 miles/4gal

Normal range of consumption

short journey, suburban	42mpg
hard driving, heavy traffic	43mpg
motorway—70mph cruising	43mpg
mixed roads—brisk, 50mph cruising	48 1/2 mpg
quiet rural—40mph cruising	54 1/2 mpg

Consumption at steady speeds

30mph	70 1/2 mpg
56mph	44 1/2 mpg
70mph	43mpg
max mph	34 1/2 mpg

SAFETY CHECKS

steering: energy absorbing?	Yes	hazard warning: fitted?	No
front seats: secure mounts?	No	interior: well padded?	No
head restraint?	No	w/screen: laminated?	No
front belts: effective?	Yes	doors: crashproof?	Yes
convenient?	No	childproof?	Yes
rear belts: fitted?	No	petrol: spillproof?	Yes
		brakes: failsafe?	Yes
		load sensitive?	No

FUEL 3/4-star/96 octane min
overall consumption 47mpg
effective tank range 200 miles/4 1/2 gal

Normal range of consumption

hard driving, heavy traffic	39 1/2 mpg
short journey, suburban	41mpg
motorway—62mph cruising	43 1/2 mpg
mixed roads—brisk, 50mph cruising	49mpg
quiet rural—40mph cruising	55mpg

Consumption at steady speeds

30mph	72mpg
56mph	51mpg
70mph	43 1/2 mpg
max mph	31 1/2 mpg

SAFETY CHECKS

steering: energy absorbing?	Yes	hazard warning: fitted?	Yes
front seats: secure mounts?	Yes	interior: well padded?	No
head restraint?	No	w/screen: laminated?	No
front belts: effective?	No	doors: crashproof?	No
convenient?	Yes	childproof?	No
rear belts: fitted?	No	petrol: spillproof?	No
		brakes: failsafe?	Yes
		load sensitive?	No

FUEL 3-star/94 octane min
overall consumption 34mpg
effective tank range 240 miles/7gal

Normal range of consumption

short journey, suburban	27mpg
hard driving, heavy traffic	27 1/2 mpg
mixed roads—brisk, 50mph cruising	32 1/2 mpg
motorway—70mph cruising	34 1/2 mpg
quiet rural—40mph cruising	41 1/2 mpg

Consumption at steady speeds

30mph	53mpg
56mph	40mpg
70mph	32 1/2 mpg
max mph	25 1/2 mpg

SAFETY CHECKS

steering: energy absorbing?	No	hazard warning: fitted?	Yes
front seats: secure mounts?	Yes	interior: well padded?	No
head restraint?	Yes	w/screen: laminated?	Yes
front belts: effective?	Yes	doors: crashproof?	Yes
convenient?	No	childproof?	Yes
rear belts: fitted?	No	petrol: spillproof?	No
		brakes: failsafe?	Yes
		load sensitive?	No

PRICE (£)	CAPACITY (CC)	FUEL OVERALL (MPG)	MAXIMUM SPEED (MPH)	0-60MPH (SEC)	30-50MPH IN TOP (SEC)	BEST STOP (% g/lb)	OVERALL LENGTH (FT/IN)	MAXIMUM LEGROOM FRONT (IN)	TYPICAL LEGROOM REAR (IN)	STEERING TURNS/ CIRCLE (FT)
2091	848	41	73	26.1	14.4	97/70	10' 0 1/2"	39 1/2	34 1/2	2 1/30
2253	1098	35	77	23.6	19.0	94/80	13' 0 1/2"	39	38	3 1/30 1/2
2129	1481	29 1/2	91	15.1	12.0	96/80	13' 10 1/2"	38 1/2	40	3 1/39 1/2
2120	845	39	74	26.4	15.8	98/60	12' 1"	40 1/2	34 1/2	3 1/32
2190	988	38 1/2	83	20.4	17.0	92/70	12' 6 1/2"	38 1/2	35	3 1/32 1/2

INTERNATIONAL
GOLD MEDAL
INVENTION 1976



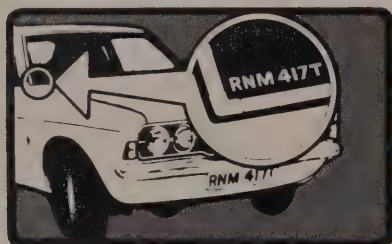
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Everyman



The Everyman day for the £2000 tiddlers was also the last for regular panellist David Everest. Veteran of 10 test days, he was now too 'professional'

to merit the amateur status of a DRIVE Everyman! On the other hand, it was the debut of Wimbledon, London, housewife Sheila McGowan, 25, a Mini Clubman estate driver and mother of two. With regulars Denise Bewsy and Roy Kidman, they set to work on the Citroen, Skoda and Fiat—and plumped for the *petit* Frenchman

CITROEN DYANE

If the panel had seen the group in a showroom, the Citroen would have been an also-ran. But, over DRIVE's 30-mile Everyman test route, they discovered that you can't always believe your eyes...

'I love the roly-poly suspension,' said David, 'and I was impressed by the comfort and five-door practicality. The performance is worse than useless, top gear is very obstructive, and everything is plasticky and flimsy; yet it still seems as if this is the car that will get there in the end.'

Sheila was rather bemused by the odd gear change: 'Getting used to it really was hard—I'd seen nothing like it before! But

the space is great for shopping, and I didn't think it was noisy—my Mini makes *such* a din.'

'It's a fun car,' said Denise. 'You could take it anywhere. I had fun with the gear lever to start with, but in the end it seemed quite logical. Not so the handbrake—it was too far away.'

'The steering is heavy for such a small car,' said Roy. 'Being short, I couldn't see the speedo—but I didn't need to: I could *hear* how fast I was going!'

'They obviously loved it,' said DRIVE professional tester Richard Taylor. 'I wonder, though, what they'd have thought of it if they'd had to change the distributor?'

SKODA ESTELLE

All but Sheila McGowan voted the Skoda into second place—Sheila made it third. 'I had trouble driving it at all. I couldn't get the right gears, I couldn't make any sense of the steering; it was all very worrying. After this one, I just wanted to go home. It is good-looking, in a way, but I wouldn't ever have one.'

'The gear lever felt as if it were mounted in a pile of jelly,' said Denise. 'And I had to sit sideways to reach the pedals. It was the best of the three for performance, but I noticed that the oil-pressure gauge was reading rather high...'

'It is good-looking,' said Roy. 'Better than the other two. But its

steering is the worst I've encountered. The seat backs are too hard, and the static belts were difficult to adjust; but the roadholding seemed good, and it does have a lot of room inside.'

'It is the worst car I have ever driven,' said David. 'The only thing that made it preferable to the Fiat was its roominess. If this is the improved version, what was the earlier model like?'

'The panel is being a bit hard,' said Richard. 'The gear change is a struggle, the steering is heavy, but this is a lot of car for little money. Denise's "high oil-pressure", by the way, was normal water-temperature...'

FIAT 126 DE VILLE

Fiat's offering was just too small for everyone—'a motorised shopping basket,' said Roy. 'And the ride is very rough. The gear lever is nearly as big as the car, and my left foot kept getting caught under the clutch. The seats were all right, though.'

'It's a crying shame it isn't bigger,' said David, 'for it could be quite a good car. It's super to drive, but I can't see where it would fit into a family, even as a third car. The ride is terrible—it really jumps about—and it's noisy; but so are all these cars. If it just had more space...'

'One of the worst cars I have ever driven,' said Denise emphatic-

ally. 'I *hate* small cars. Even the seats in this one are small... but perhaps that's more a comment on me. The brake and clutch pedals are too close together, and the angle of them gave me cramp in my left leg. I liked the steering and the gearbox, but I wouldn't want the car as a present.'

'Just too small,' said Sheila. 'I couldn't put my children in the back, let alone the dog, too. But if it was just that little bit bigger, I'd have no complaints.'

'They're missing Fiat's point,' said Richard. 'This isn't a family car—it's an urban two-seater. Maybe there just isn't a market for this kind of car these days...'



MY KIND OF PLACE Hospitality sweet

AFTER 30 YEARS' eating out in the line of duty, *my* kind of place is where they don't

—fix the charges to attract a 'higher class' of patronage
—make the decor derivative of every current in-place
—dress the staff in ridiculous uniforms in the mistaken belief that it adds 'atmosphere'
—treat the customers with barely-concealed distaste.

On the other hand, *my* kind of place most definitely is
—where the food is well-cooked

and is reasonably priced as well.
—where the decor is unpretentious, functional, immaculately clean

—where the service is friendly, helpful, welcoming
—where the menu has been chosen with the limitations of the cook in mind, rather than the expectations of a largely philistine clientele!

The other day I ate in a restaurant that I can only describe as unspeakable. It committed the cardinal sin of listing some of the most refined dishes from the best restaurants in London, yet preparing them with neither the knowhow nor the skill to approximate to any acceptable standards of cuisine.

The prices were astronomical, and there was an unjustifiably high, and obligatory, service charge... yet the place was full.

I wondered why, and studied the people tucking in, and came to the conclusion that they belonged to that exclusive set who eat on other people's money.

It was that horror-of-horrors—an expense-account rip-off joint, feeding off the ignorance and the

indifference of those with jaded palates and no appreciation of value for money.

The sort of place where, for instance, they serve lemon sole in place of the more-expensive Dover sole, confident that the customers won't know the difference; where they try to get away with all kinds of tricks to disguise an inferior cellar stock.

At any restaurant, a welcoming smile at the door is a good sign; an attempt made to guide the guest through the menu is another. Look for service that aims to please. If the staff doesn't appear to enjoy the job, they shouldn't be in it.

The bill, of course, must be correctly totalled and itemised in legible detail. And, if there is a service charge, it should be in keeping with what you would have left as a tip.

If ever you stray into a strange place where none of these things is satisfactory—*don't go back*.

In the end, if enough customers stay away, a restaurant proprietor will mend his ways or go out of business. And nobody should weep over his going.

★ **Bubb's**
329 Central Market
London, EC1 (tel 01-236 2435)
Almost aggressively downgraded, with bare floorboards and maroon-painted walls, this is an excellent example of a restaurant that concentrates on *food*. Mr and Mrs Bubb (Yes, they do exist!) take advantage of their proximity to Smithfield and Billingsgate Markets to buy the finest meat and fish and prepare it with skill. Dinner for two, £15; wine extra.

★ **15th Century**
42 High St, Billingshurst
W Sussex (tel 2652)
Owned and run by an Austrian, who supervises the kitchen while his wife runs the restaurant, this is, as the name suggests, a white-painted, half-timbered cottage with true period atmosphere. Excellent value, though not cheap for a country restaurant. Dinner for two, about £17, with wine.

GEOFFREY LERWAY

Geoffrey Lerway is the AA's new chief hotels inspector, succeeding former DRIVE columnist Robin Wills, who has gone off to run the AA's luxury holiday village in Scotland's Spey Valley.

DRIVE now has more than 120,000 regular readers.

In 1979, we're gonna light their fire.

TODAY, as the lights go out all over 1978, we promise to make your New Year lighter, brighter and a whole lot happier, January through December, with DRIVE. It's our proud boast that DRIVE is the wholly *different* motoring magazine. And, in 1979, we aim to prove it—once again—quite simply by meeting your everyday-motoring needs with all the facts and figures, advice and information that, via the AA, we are uniquely equipped to provide. From our tough-talking car tests, exclusive Index of Motoring Costs and widely-reported investigative features to our Q&A clinic, used-car price guide and advice-columns on everything from holidays and hotels to motor sport and motor mechanics (plus those Special Offers)... we honestly believe that DRIVE is *essential reading* in every motoring household. Ensure its presence in yours, throughout 1979. Complete and send us the coupon right, FREEPOST. And we'll light fires under the rest...

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D55

About yourself initials surname **BLOCK CAPITALS**

Mr Mrs/Miss

Address

Daytime Telephone No Post Code

Membership No. (or write non-member)

Occupation

Employer's business

When would you like cover to commence? day month year

On that date (a) How old will you be? yrs

(b) How long will you have been resident in the UK? yrs

(c) How long will you have held a full UK driving licence? yrs

(d) How many years No Claim Discount will you have earned in your own right? yrs

Name of your present Insurance Company

**FOR OFFICE
USE ONLY****About your car**

Make and model of car including details of modifications

Engine cc Year of manufacture 19 Value £

When do you use your car?***Please delete the word
that does not apply**

In addition to private use, will the car be used for:

(a) Driving to work on three or more days a week? YES/NO

If yes, name city, town or suburb where you work

Is your place of work more than 10 miles from your home? YES/NO

(b) Business use by yourself only? YES/NO

(c) Business use by any other person? YES/NO

(d) Commercial travelling? YES/NO

(e) What is your estimated annual mileage? miles

Have you or any other person who will drive this car:

(a) Been convicted of any driving offence other than parking? YES/NO

(b) Been involved in any accident in the last five years? YES/NO

(c) Suffer from any physical disability or infirmity e.g. heart disease etc? YES/NO

If you have answered yes to 'a', 'b' or 'c' please give details on separate sheet.

Please indicate (✓) who will drive the vehicle:

(a) Yourself only ☐

(b) Yourself and wife/husband only ☐

(c) Yourself and one named driver only ☐

(d) Any licensed driver ☐

In the case of (b) and (c) please give details of other driver or in the case of (d) details of youngest known driver. Age

Length full UK Driving Licence held? years

What cover do you want?

Please tick the type of cover you require:

Comprehensive ☐ Third Party Fire & Theft ☐ Third Party Only ☐

Do you wish to reduce the premium by bearing up to £25, £35 or £50 of the cost of any damage to your car? YES/NO

If yes, please write your choice here

Registered Office: Fanum House Basingstoke Hants RG21 2EA Regd. No. 912191 England

Please send details of the other special AA policies I have ticked:

☐ Homesure ☐ Leisureplan for caravan, camping etc. ☐ Travel

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☐ Mortgage protection ☐ Retirement plan for self-employed

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nearest AA office.**



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It's so easy to make a mistake when arranging your motor insurance. Trying to balance the best cover against the hefty premiums you have to pay today, you can make the wrong decision without even knowing it — until it's too late. The AA want you to be sure you have the best-value policy for your own needs, and we do this free.

The time to check your existing policy is now. Don't wait until you need it. The way to check is simple — just fill in the form on the left and free-post it back to the AA.

Remember too, you may be eligible for these special discounts...

If only you and your wife are driving the car, we can save you up to 20%.

If you are over 51, you can obtain at least a 10% discount. If your car is over 6 years old you can get a further 10% discount.

If you are willing to bear the first £25, £35 or even £50 of any damage bill, we can save you up to 20%.

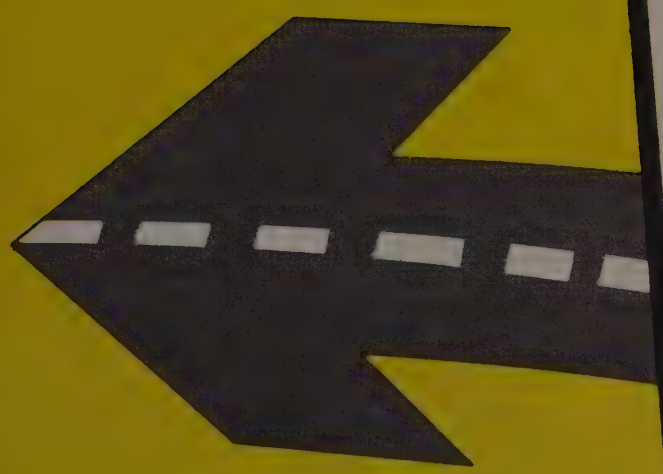
We can also get you substantial discounts for certain occupations. You can even pay your premiums by easy instalments if you wish.

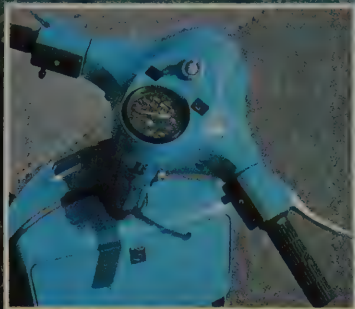
Get details of other extra-value AA policies too

AA Insurance Services offer members a free broking service for all policies. Motorsure for example — 2 year warranty cover for your car repair bills. Cover for your house and contents too, your leisuretime activities, or holiday and business travel. We also have low-cost life assurance and high-return regular savings policies on special terms. For details, tick the appropriate box on the checklist left, before you send it off.



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motor
insurance
cost
before
proceeding





Mods and rockers



Vespa P200E**Price £489**

Scootering has so little in common with motorcycling that few enthusiasts are prepared to take it seriously. Yet the Vespa P200E proved, in our tests, superior to a conventional motorcycle in any number of ways.

At low speeds it purrs along like a cream-filled cat, barely audible to the rider. On the open road, what little exhaust noise there is fades away altogether. And partnering this delightful characteristic is a lack of vibration that suggests the power source isn't on board at all.

Starting is quick and easy, and the machine's demeanour in heavy traffic is gentle and wholly civilised. So wide is the power spread of the engine, for instance, that acceleration in top gear is sweet and strong from as low as 10mph. And it can be balanced, feet-up, like a trials machine.

But nothing is perfect, of course, and the P200E shares the traditional faults of most scooters. The front brake is weak, and lacks vital 'feel', while the rear is useful in all but hard emergency stops, when it proves to be *too* powerful.

Strangely, while higher speeds feel secure, 50mph cruising, especially in a gusty down-wind, or when following in the wake of another vehicle, makes the scooter wobble lightly. In fact, this proved on test to be no more than a harmless idiosyncrasy, for, however the P200E wavered, its wheels remained firmly in line.

These are the only real faults. In all other respects, the machine excels. Although obviously designed as a town vehicle—on which roads it returns between 53mpg and 70mpg—it quickly adapts to the role of super little inter-city express.

On long rides, the P200E provides an unusually comfortable and undemanding ride. Its two-stroke engine is probably unique among its type, producing a deep and well-modulated exhaust note instead of the usual rasping fussiness; and, when cruised at full throttle for long periods, it displays not the slightest hint of stress. The only disappointment is a cruising range of little more than 100 miles from a 1.76gal (including $\frac{1}{2}$ gal reserve) fuel tank. Lubrication is by old-fashioned petrol mix at a 50-to-1 ratio.

With the power unit over the off-side of the rear wheel, all routine maintenance tasks are simple enough, although electronic ignition (which contributes valuably to the faultless low-speed engine performance) helps to reduce the chores to little more than occasional control cable and plug adjustment.

Sadly, the British importers appear to have taken the simplicity theme to extremes, and are selling the model without a

battery. The result is a lighting system without parking lamps, and a main beam that extinguishes at an accidental engine stall. The lack of a rearview mirror and a decent horn are other serious oversights.

Thanks to car-type, pressed-steel body construction that stylishly covers the mechanics, it is not only simple to wash the Vespa (10–15min), but it also keeps itself and its rider clean and reasonably dry in wet weather.

There is a useful shopping-bag hook under the nose of the dual seat, and an even more useful light-luggage locker on the leg-shield. At the other end of the Vespa, on the nearside and hidden under the sprung-hook-fastened blister, is the spare wheel—suitable for front or rear, of course, and changed in a very similar manner to a car wheel.

The Vespa may have changed little in concept or shape since 1947, but it is still the closest thing to a two-wheeled city car.

Kawasaki Z200-A1 Price £579

Kawasaki has long been famous as a maker of exotic sportsters, especially two-strokes. But times are a-changing, and as the superbike power-game approaches its climax, Kawasaki is beginning to treat the down-to-earth, lightweight commuter-machine market with respect. And one of the best lightweight all-rounders to come from any manufacturer is Kawasaki's Z200.

This four-stroke single is very much a scaled-down big bike, reminiscent of the old heavy-weight 'thumpers' turned out by the now-defunct British industry.

In all major respects, the Z200 appears to be robustly built, giving an impression of durability. Although simple in construction, its performance is impressive and its detail finish is thoughtful—and no less sophisticated than any expensive, large-capacity machine. Unlike most Japanese bikes, Kawasakis require a long running-in period. DRIVE's test model was brand-new.

One key fitted the ignition, steering, fuel tank filler cap and hinged seat lock (which incorporates a

helmet lock). An electric starter is backed up by a big 12v/10ah battery and a powerful generator. Compared to the Vespa, the entire electrical system is magnificent—except, unhappily, for the 35w headlamp, which is barely adequate for 55mph cruising.

Starting, whether by foot or electric, is quick and easy, although requiring deft use of the choke early in the morning.

In daytime cruising, DRIVE testers found that speeds in the 60–65mph bracket were best. These kept the engine spinning at around 7000rpm—still some way from the 9000rpm limit, but smack on the fattest part of the power curve.

On average, the 1.75gal pre-reserve ($\frac{1}{2}$ gal) capacity of the tank made refuelling necessary only over 150 miles or so during our test period. A careful private owner should enjoy 100mpg.

The degree of comfort afforded by this little 'big' bike is quite extraordinary. The handlebars have a generous curve; the tank is fat enough to grip comfortably; the seat is large enough to move around on, and to carry a pillion rider with ease; and the suspension is close to luxurious. Firmer springs and damping might eliminate the slight wallowing that can be induced by high-speed cornering over poor road surfaces, but probably only by impairing the overall pleasant feel.

Braking is excellent, though there is a lag in the operation of the front unit during wet weather while the disc is wiped clean of water film by the clamping pads. The rear drum brake makes up for this at low speeds.

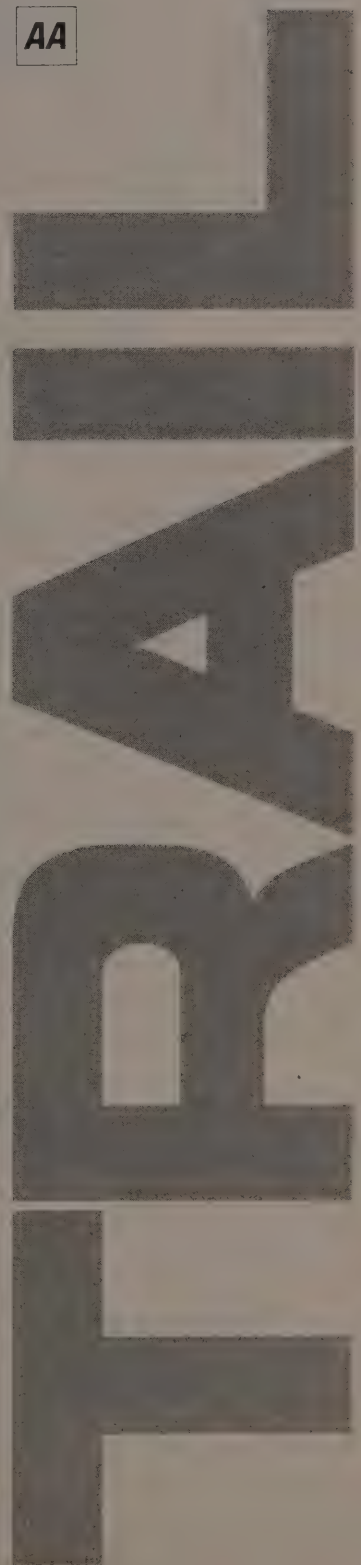
Regular maintenance is restricted to a 3000-mile oil change and occasional control cable, battery, chain and contact-breaker checks; air and oil filters require changing every 6000 miles. All this can be accomplished simply using the 13-piece toolkit and useful owner's handbook.

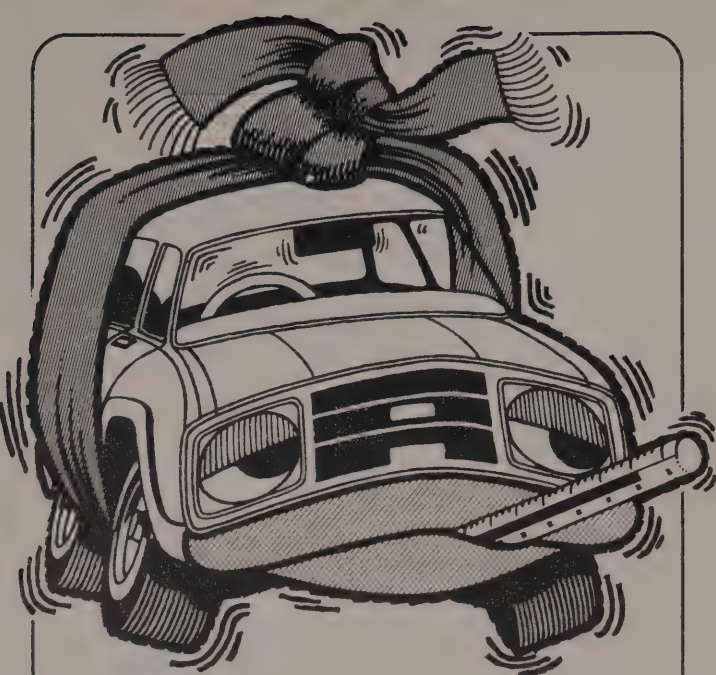
The Z200 is *not* a sports machine. It is a lightweight of quality that should appeal strongly to anyone with a yen to try bikes again, or to a youngster with sense enough to want more than a high top speed.

AA

HOW THEY MEASURE UP	VESPA P200E	KAWASAKI Z200-A1
Engine	Fan-cooled, disc-valve, 2-stroke single not available	Air-cooled, single ohc, 4-stroke single 18bhp/8000rpm
output		
Transmission	4-speed gear-drive	5-speed exposed chain
Kerbweight	260lb	300lb
seat height	31in	31 $\frac{1}{2}$ in
max width	27 $\frac{1}{2}$ in (handlebars)	27 $\frac{1}{2}$ in (handlebars)
max length	69 $\frac{1}{2}$ in	78in
Fuel tank	1.76gal (1.50gal inc. res.)	2.2gal (2.00gal inc. res.)
Mpg—overall	72	89
quiet use	97	98
suburban use	81	91
brisk use	66	80
hard use	53	64
Performance—max	61 5mph	72 5mph
0–50mph	14sec	9 6sec
30–50 (top)	14 1sec	10 6sec
Warranty	2 yrs (or 20,000 miles) parts and labour (negotiable)	2 yrs (or 20,000 miles) parts and labour

Details of your 1979 summer break are all in TRAIL—sister-title to DRIVE—for campers, caravanners and all who love the great outdoors. There's an issue on the bookstalls now, and the next, summer sun-filled number appears on 25 January... complete with a FREE full-size site map of Gt Britain. Don't miss it!





Don't catch a cold this Winter

Cars can catch cold too, in Winter. Frosted windscreens, condensation, chilly steering wheel and seats.

And cold air blasting from the 'heater' ...

It's enough to send you back to bed!

Fortunately, it need not last long. All is resolved when the car's engine warms up - and that's where a Waxstat can help.

A genuine Waxstat thermostat, fitted to your engine, gives your car a rapid warm-up. Heaters work sooner and blow hotter air; driving quickly becomes comfortable. And, because visibility clears earlier, motoring safety can be improved.

Furthermore, rapid attainment of optimum engine temperature actually saves you fuel.

Fitting a new Waxstat thermostat is easy, usually being accomplished in about 20 minutes without special tools. The Waxstat range is available from your garage or accessory shop. Treat yourself (and your car) to one today!

Warm up quickly this Winter with a genuine WAXSTAT®

Waxstat is the name of the engine thermostat used as original equipment on over 90% of British cars.

Western Thomson Controls Ltd

Millfield Industrial Estate Chard Somerset
Telephone Chard (04606) 5101

Clinic

Any problems? Whether they are technical, insurance or legal, DRIVE's experts can help. Write to: Clinic, AA, Fanum House, Basingstoke, Hampshire

Spray no more

My 1973 Ford Cortina has been well looked-after, but rust has set in, despite my efforts with many of the 'best' anti-rust treatments. As I intend to keep the car for a reasonable period, I have not yet given up hope of warding off the corrosion and I am considering trying one of the DIY rustproofing kits on sale. I have heard, however, that rustproofing over rust—which must exist in areas such as the box sections—can accelerate rather than prevent corrosion. Would I be wasting money?—CW STEVENS, REDCAR

Provided conditions are favourable, proprietary DIY treatments can be satisfactory. However, there are problems in DIY rustproofing, such as the difficulty of thorough cleaning prior to application; knowing where to drill and where to spray for complete coverage; and the

problem in checking whether closed sections have received enough coverage.

No DIY treatment, in our opinion, is likely to prevent further corrosion on a six-year-old Cortina. In fact, we don't recommend rustproofing cars of this age. Even if all the underside and closed sections could be coated, rust could still progress from pinholes or other points where the paintwork has been penetrated. And if closed sections are not covered completely, then, as you say, corrosion will be accelerated where treated and untreated surfaces meet.

Sorry, but while such treatments may be good for your soul, they won't do much for your Cortina.

Pole fault

Told that my Morris 1000's dynamo had burnt out, I fitted another bought from a scrapyard. I thought all was well, since the ignition warning light in the fascia came on and went off as it should. But, after driving the car for only a day, I found that my fully-charged battery had gone flat.

I got the car to a garage which fitted a new dynamo and control box. A mechanic told me that the dynamo I had fitted was of the wrong polarity. How can this be so? Surely a dynamo will charge no matter what?—J KIRKPATRICK, WHITE WALTHAM

A dynamo produces electricity by

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ATOL
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its armature turning in a magnetic field as the car moves. The same dynamo can be used in either a positive- or negative-earthed car, provided the north and south poles of the field magnets in the dynamo case are arranged to suit.

Because the dynamo that you fitted was not correctly polarised, it produced current in the opposite polarity to the battery as soon as the engine was started. And, when the cut-out points in the control box closed, a short-circuit welded the points together.

When you stopped the engine, the cut-out points could not open as they should, and the battery went flat as its current drained through the dynamo windings, in turn damaging these beyond possible repair.

Tight spots

I recently parked my Ford Cortina under some trees from which birds—big ones, by the look of it—carried out target practice. So hard have their droppings set on the car roof that I just can't find any way to shift them.

I'm afraid to try anything too drastic for fear of damaging the paintwork. Is there any solvent available that will do the trick?—L MURRAY, ALTON

Two paint manufacturers admit that this is an awkward problem. They are both adamant in saying that you should not use solvents,

as these are likely to bleach the paint. They suggest, instead, that you use plenty of hot, soapy water and a lot of patience.

Don't rub so hard that you scratch the surface. If necessary, build a wall of modelling clay round the affected areas, fill them with water and let the deposits soak and soften; then keep washing until they disappear. If (as is quite likely) the droppings have marked the paintwork, polish with a fine compound such as Bluebell or Silvo.

Hush money

While I was turning into a station, a van started up and reversed into my car. The driver was very apologetic, accepted full responsibility, and gave me his name and address and van registration number. I said that I would write to him as soon as I had obtained estimates for the repairs. This I did, and promptly sent him the one I thought most reasonable—£35.56.

After three weeks, and no reply, I sent a further letter by recorded-delivery, stating that, if I did not hear anything within a given time, I would be obliged to take more formal action. Still nothing.

What should be my next move?—MRS M MORGAN, HAMPSTEAD

It is, of course, late in the day for you, but, if you have a comprehensive policy, you should have notified your insurer that an accident had

occurred, that the other driver had agreed to pay, and asking your insurer to do nothing until you gave further instructions. That way, you could simply file a claim in the normal way and stand a good chance of protecting any no-claims discount you may have: your insurer would claim its costs from the van driver.

At this late stage, however, few insurers will agree to becoming involved in a private arrangement between you and the van driver.

Now, if the van driver isn't prepared to consider your claim, you will have to start proceedings in the small-claims section of the county court—and you would seem to have a reasonable case. The matter can be dealt with by the court at little expense to you: generally, costs are not recoverable by either party where the claim is less than £100. Your local county court will help complete the summons.

We don't believe it would be worthwhile instructing a solicitor, for his costs would be higher than the amount of your claim. Alternatively, if you are a member, you could ask the AA to take up your case.

Protection of privacy

I have recently witnessed two accidents: one was in an hotel carpark, when a guest scraped his car along the side of another; the other was on a campsite, when

an L-driver crashed into a caravan, causing extensive damage. In both cases the offending drivers washed their hands of the incidents, claiming that they had occurred on private property and weren't subject to normal law.

Is there nothing that the owners could have done, other than make private (and possibly expensive) court claims against the guilty parties?—R V ORPIN, SOUTH OCKENDON

There is no reason at all why the two drivers you mention shouldn't be sued in the normal way via the respective insurers. In a civil case, it makes virtually no difference whether the damage was caused on a public road or on private property.

It sounds as though your two offenders are confusing police actions and private actions to good effect: as you can read in *Motoring Law* on page 60, for the police to pursue a case against them may be altogether more difficult...

DRIVE is indebted to Mr C J A Gallimore, ARICS, of Hereford, for pointing out that car auctions (May-June 1978 issue) may be conducted by a 'chartered surveyor, chartered auctioneer and estate agent' under the auspices of the Royal Institution of Chartered Surveyors, and that any sharp practices would certainly involve the member in question being suspended from the RICS.

AA

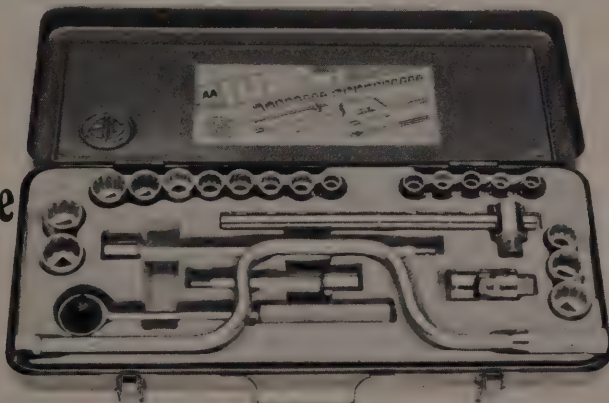
How much do you care about your car?

It may be a gleaming new model straight off the production line—or an ageing reminder of happy motoring in the past. But if you care about it—there's one thing you should do. Look in the boot. Check your tool kit, and make sure you're prepared to do more than just change a tyre.

Be prepared. With one of the AA's Tool Kits. Essential for every motorist—not just the enthusiast. Take your pick, from the superb 24 Piece Socket Set or the simple, yet carefully thought out Motorist's Tool Roll—or even take both! It makes sense.

AA

24 piece Socket Set



Get at those nuts where a spanner can't reach. The comprehensive set contains 18 x 1/2" square drive sockets (10 A/F 3/8", 7/8", 1" sizes and 8 metric 10-22mm sizes), a reversible ratchet, speeder handle, sliding tee-bar, 12cm and 25cm extension and a universal joint.

£26.95 inc. p&tp
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Non-Members should enclose full payment with order.

AA

Motorist's Tool Roll

The handy collection comprises set of 6 combination spanners in A/F or Metric, engineers screwdriver, and crosspoint Phillips model, insulated combination pliers, multi-grip pliers, ten blade feeler gauge, sparking plug socket. Tools are visible in the wipe clean PVC roll. Pockets to keep screws etc. safe, and hand cleansing tissues too.

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Offer applies to U.K. only. The AA confirms that it will hold prices until 1/3/79 subject to changes in VAT. Please enter your membership number here

Membership no _____ ; 794 ;

Item required	Price	Ref. No.	Qty.
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Motorist's Tool Roll A/F	£9.95	76209	;
Motorist's Tool Roll Metric	£9.95	76212	;

For office use only Skip out _____ ;

PBM 698



J BULL'S FIRST CAR

Hungarian rhapsody

by GEORGE MIKES

IT WAS a pioneer, my first car. I bought it in Budapest in 1937 as a very young journalist, when I did not have the slightest intention, or indeed desire, to live the rest of my life in Britain. Yet it was a British car. A pioneer of British craftsmanship; the very first British car to arrive in Budapest, and not just as a visitor. (For the sake of historical accuracy I must add that it was in a batch of three.)

My Austin Seven was a purely political choice. Germany was under Nazi domination, and I refused to buy a German car. An Italian car would have been a pos-

sibility, but I did not like the then extremely popular Fiat Topolino. So it had to be a British car.

Those of us who still remember the pre-war Baby Austin recall it with great affection. It was without doubt the ugliest car ever made, being extremely narrow and very tall. It was, I was told, a favourite of English doctors (perhaps true), and English doctors visited their patients wearing top hats (true in 1837, untrue in 1937). And the great height of the car, the explanation went on, enabled the doctors to keep their top hats on while driving.

This explanation gained credence and caused merriment in Budapest. In fact, I received three top hats as gifts from friends...

The dealer instructed me to have the car serviced every week. He wanted to make money, and I was a sucker. So I took my car to be serviced every Wednesday afternoon. There, in the courtyard of the service station, I met other new car-owners and, naturally enough, we talked exclusively of cars and driving.

I told one of my new friends that I intended to drive up the Gross Glockner mountain, which then

had a brand-new motor-road, rather difficult to negotiate. My friend shook his head and disapproved of my plans. I was too inexperienced for such a trip; I would never make it.

I smiled.

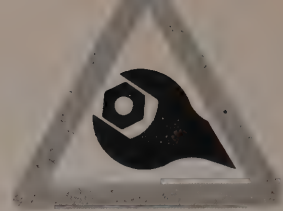
Two weeks later we met in the street, in front of the narrow entrance to the service station—in fact, the entrance of a courtyard to an ordinary house never meant to be a service station.

He was coming from the right, I from the left. I gave him a triumphant look: I had just returned from that very difficult mountain journey without a hitch.

He gave me a signal of appreciation and waved me on to drive in first. I reciprocated with an 'after you' gesture, but, as he insisted, I went in first.

Having negotiated one of Europe's most dangerous mountain passes without any trouble, now in the flush of my triumph and wanting to show off my driving skill I drove into the wall at great speed, smashing my lamps, my radiator and one of my front wings to smithereens.

That day was the last occasion I cried real tears over a motor car.



MECHANIC

Give us the tools!

IT PROBABLY was the last thing you thought of as you stood in the showroom, but sometimes, at the side of some road, you are almost certain to have good cause to examine closely the toolkit of your car. And, chances are, you'll wish you'd thought of it before...

Here, DRIVE examines 12 new-car toolkits, and finds that what you get doesn't always match what you'll need when the little things leave you stranded.

Of DRIVE's dozen, both the best and the worst were British, and BL's kit for Rovers and Jaguars came close to the ideal. The irony, though, is that the *best* kits almost invariably belong to the cars whose owners are *least* likely to need or choose to use them.

A general criticism of all the kits examined is the almost-universal lack of *odd* tools—the curios needed for special screws, nuts and bolts of a maker's whim.

Location is important, too: a toolkit is of little use if it is dispersed willy-nilly around the car, necessitating a hunt in darkness. And cost, of course, is vital—that's why accountants now design cars, and approve inadequate toolkits.

But a £20 kit could earn its keep in just one roadside repair... and its cost, added on to the already-considerable new-car bill, surely would be accepted, not resented?

It's reasonable to assume that keen DIY motorists will build up a toolkit of their own; but they won't necessarily want to carry all of it with them all the time. A manufacturer's kit is invaluable if only to ensure that you have metric spanners for a metric car, whatever you have at home.

So, what should the basic toolkit consist of?

DRIVE asked the AA's technical services department for a checklist of what would be desirable and useful to cope with on-the-road problems and mini-services. The list reads like this: set of open-ended spanners—more useful than ring-type (include small sizes, please); feeler gauge; tyre-pressure gauge; pliers; screwdriver with two sizes each of flat-bladed and crosshead bits; plug spanner and tommy-bar.

And this, on the next few pages, is what we found... MIKE HILL



INSURANCE

Sex lesson

IN HER student days, Sheila French campaigned vociferously for sex-equality; at veterinary college, she made every effort to speak up for the cause of women. And she didn't allow marriage to a fellow-student to temper her views one iota... Soon after they qualified, though, she found it hard to reconcile her sense of fair play with the realisation that, so far as motor insurance was concerned, it was her *husband* who was being discriminated against.

Having moved to a small Devon market-town to set up their own veterinary practice, they each bought a small estate car and went to the same insurance company for cover. What shocked them was that, not only were they offered different terms because of their sex, it was Sheila who got the better bargain.

'But why should Frank pay more than me?' she asked her broker. 'We've had much the same driving experience, we passed our tests in the same year, and neither of us has had an accident.'

Statistically, her broker told her blandly, women have fewer acci-

dents. He wasn't able (or willing) to support the statement with figures, but he assured her that most big companies agree that, in the most vulnerable 20-29 age-group, women drivers make fewer claims, so are better risks.

Having a restless and enquiring mind, Sheila couldn't resist the challenge to put the claims to the test. She contacted several major companies:

Sun Alliance, London: 'For the named drivers over 25, we offer a 15% discount for women and a 10% discount for men. Sorry—we can't tell you *why* we arrive at this difference.'

Provincial, Kendal: On each 100 policies, women make six fewer claims per year than men, and the claims they make are cheaper. That's why we think women are worth a 15% discount on a one-named-driver policy, against only 12½% for men.'

Commercial Union, London: 'We don't normally give comprehensive insurance to drivers under 25, or discriminate between men and women; but, because women tend not to "show off" as much as men in a car, on balance we *prefer* to insure them.'

General Accident, Perth: 'We offer favourable terms to women under 30, adding two years on to their actual age to give them a better insurance rating.'

Do women aged 20-29 have fewer accidents than men? The Department of Transport's latest casualty figures (for 1977) show that 31.5% of all female casualties are in the critical age-group, while among men the proportion is 34%.

This didn't seem to Sheila

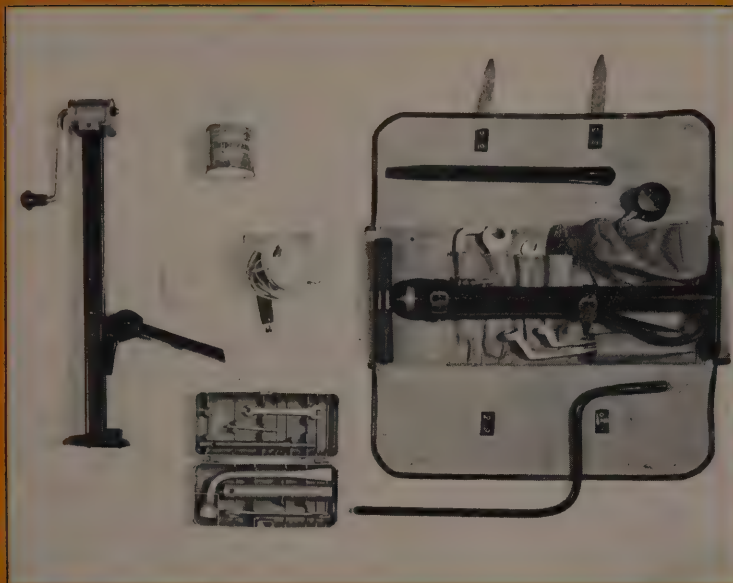
French to be conclusive evidence that young male drivers should be discriminated against, so she spoke to the British Insurance Association, which quoted her the results of a 1977 market survey by an insurance company. These showed that, on average, women drive smaller but newer cars, thereby reducing the risk of accidents from mechanical failure.

Mike Saunders, the AA's motor insurance manager, believes that young male drivers are more prone to accidents during the first 12 months after having passed their tests, and that men under 21 make more claims than women. On the other hand, he thinks that claims from female drivers increase between the ages of 21 and 24, although, with no statistics, it is difficult to be certain.

'In insurance, we work on probabilities of particular groups,' Saunders comments. 'It is obviously impossible to look individually at drivers' personalities or driving skill, so it's not just gender but also occupation that can be a decisive factor.'

Among the less-desirable occupations from an insurer's point of view are professional sportsmen and women, models, doctors, journalists—and vets. All are often exposed to high mileages and an intense lifestyle, and are bound to be higher risks than civil servants and bank clerks with more stable routines.

It was disappointing news for equal-opportunities Sheila. Equal we all may profess to be, she argued, but, in insurance terms, some are more equal than others.



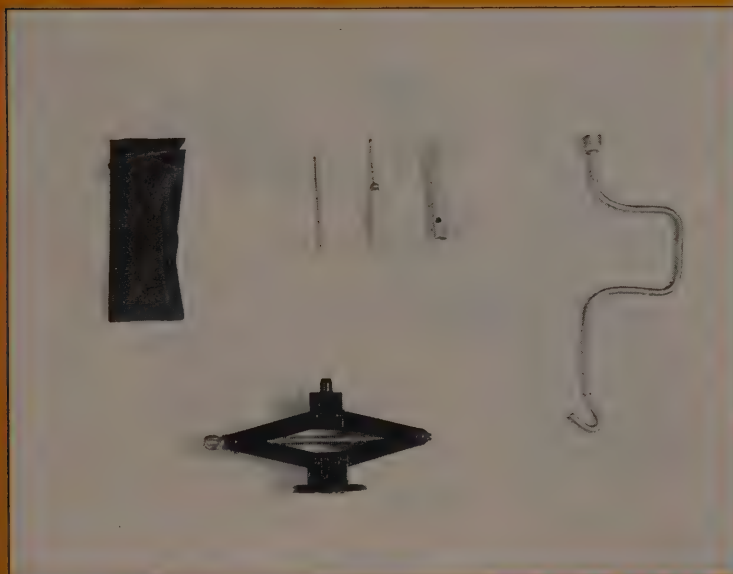
LADA

Standard with all UK models

What you get Pillar jack; wheelbrace/hub-cap lever; plug spanner/tommy-bar; 4 open-ended spanners; 2 ring spanners; hexagonal sump-plug key; pliers; tyre lever; plug-in wander-lamp; tyre-pressure gauge; tyre pump; starting handle; touch-up paint

All that toolkits used to be, including the basic Fiat plastic box, plus some fascinating Russian anachronisms.

AA comment Do you need a tyre lever if you carry a spare wheel? The stirrup tyre pump is useful for air beds. Tyre gauge is of questionable accuracy. And would you know what to do with a starting handle? Still, on one of the cheapest cars available, no one could quibble about value.



ALFA ROMEO

Standard kit with all Alfasuds

What you get Scissors jack; wheelbrace/jack handle; plug spanner/tommy-bar; small flat-bladed screwdriver.

Scissors jack has to be wound up from the ground, then located in underbody sockets—awkward in dark or on a wet night; hook-and-eye location of jack winder is sloppy and the lack of a free-turning handle on the brace could quickly raise blisters on tender hands. Plug spanner/tommy-bar offers little leverage on over-tightened plugs, and screwdriver will meet only a limited range of needs.

AA comment Disappointing kit for a prestige-car manufacturer. The jack is a real nasty.



BL

Princess (standard, without chock, on Austin-Morris)

What you get Cantilever jack and ratchet bar; wheelbrace; bent metal for wheel trims; single wheelchock

Apart from the recent addition to Princess kits of a hefty chock to help keep the nose-heavy car stable while jacking, BL kits help only with wheel changing. All the tools it used to give with its cars are now sold in a Unipart set at £15. Compare the basic kit to the handsome Rover-Jaguar offering on page 57, and ask yourself which owner is likely to need the better tools?

AA comment Jack is awkward to locate and means wet knees for a rainy wheel change—ratchet bar stays at ground level. Good 'heel' on the jack for stability.



PEUGEOT

Standard kit for all small/medium cars

What you get Scissors jack; wheelbrace/jack handle; plug spanner

Few-but-good is the French maker's philosophy. Scissors jack locates into its body socket, then winds down to the ground—easier than winding up from ground level and trying to 'thread' it into place. Winder peg is a positive lock into the jack eye, and there is one rotating hand-grip.

AA comment Not enough leverage from wheelbrace for over-tightened nuts. Plug spanner is much better—hooked tommy-bar enables an extension tube (not provided) to be used. Tools are well-located in under-bonnet clips.



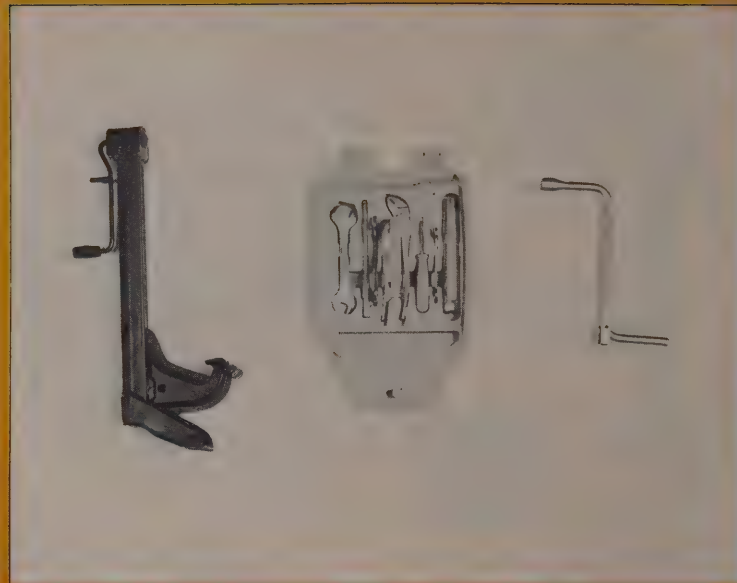
FIAT

Standard kit with all models

What you get Pillar jack; 2 open-ended spanners; plug-spanner/tommy-bar; wheelbrace; screwdriver with flat-bladed and crosshead bits

Tidy plastic box houses very basic kit, which used to include a feeler gauge (why no more?). Spanners cover only very limited range of nuts, and plug spanner/tommy bar is thin and short: more leverage may be needed for obstinate plugs. Pillar jack earns AA criticism for its inadequate 'foot' which offers no fore and aft stability for a raised car, and it can lean too far out or in (fouling the bodywork) if not set at the correct angle.

AA comment Fair basic kit, but jacking should be safer.



BMW

Kit from the 5 Series

What you get Bilstein pillar jack; wheelbrace with notch for trims; 3 open-ended spanners; plug spanner/tommy-bar; screwdriver with flat-bladed and crosshead bits; adjustable pliers/wrench

Except for the wheel-changing ironmongery, BMW owners get their tools in a neat plastic tray which snap-fits under the boot lid. Pillar jack has good positive location in car sill, and its base changes angle as car is raised; it doesn't, however, prevent fore and aft movement.

AA comment Chocks would be useful. More less-fancy tools (see Rover) would be preferable to chrome vanadium. Tray is an excellent idea.



MERCEDES

All models, with minor alterations

What you get Pillar jack; wheelbrace; screwdriver with two cross- and flat-blade sizes; 3 open-ended spanners, plug spanner/tommy-bar; warning triangle

Some excellent features, unmatched by any other maker. Plug spanner is flexible on its shaft to reach awkward places, and a special grip holds ceramic plug collars. The only kit with AA's recommended range of screwdrivers.

AA comment Not much to show for one of Europe's top-line makers. Pillar jack has little stability, and chocks are desirable. Warning triangles are superfluous in this country, but it wouldn't save much if they were omitted.



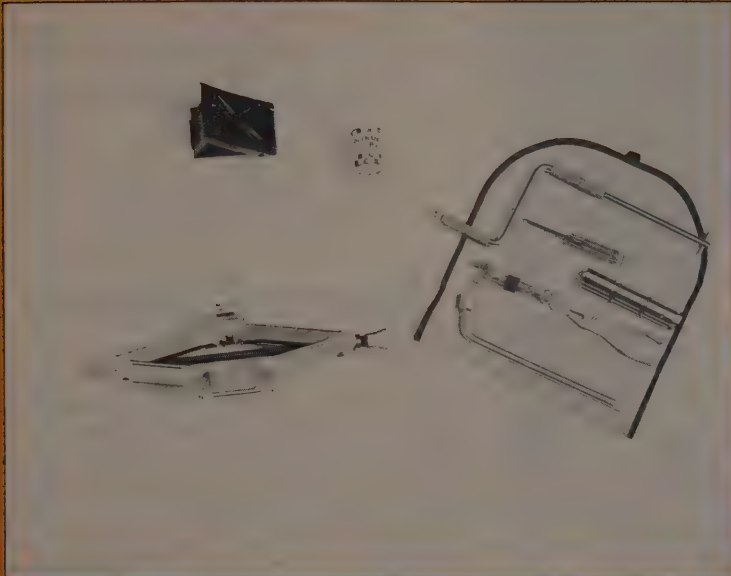
DATSUN

Standard kit with all UK models

What you get Scissors jack and winder; pair of steel wheel-chocks; wheelbrace/trim remover; 2 open-ended spanners; pliers; one crosshead, one flat-bladed screwdriver

Datsun tools come in a cardboard box that has no fixed place in the car. When the box falls apart, items will clank about loose in the boot. Jack has good wide base for stability and it is located in the body before winding. Winder fits positively, and rotating grips make use easy.

AA comment Looks impressive, but really quite basic as far as range of maintenance jobs is concerned. Chocks are a good idea, but Toyota's, for example, take up less space.



TOYOTA

Standard kit with all UK models

What you get Scissors jack and winder; wheelbrace; plug spanner/tommy-bar; pliers; 2 open-ended spanners; screwdriver with cross- and flat-bladed bits; folding wheelchock; touch-up paint

Safe, positive jack, with locating point in the body, has wide base for stability and rotating handles for easy winding. Wheelbrace gives good leverage, but tommy-bar for plug spanner should be longer. Wheelchock folds to size of cigarette packet, and all tools have a secure home. **AA comment** Good as far as it goes—but that isn't very far. As in the Lada's kit, it's always useful to have a tin of manufacturer's touch-up paint for colour matching.



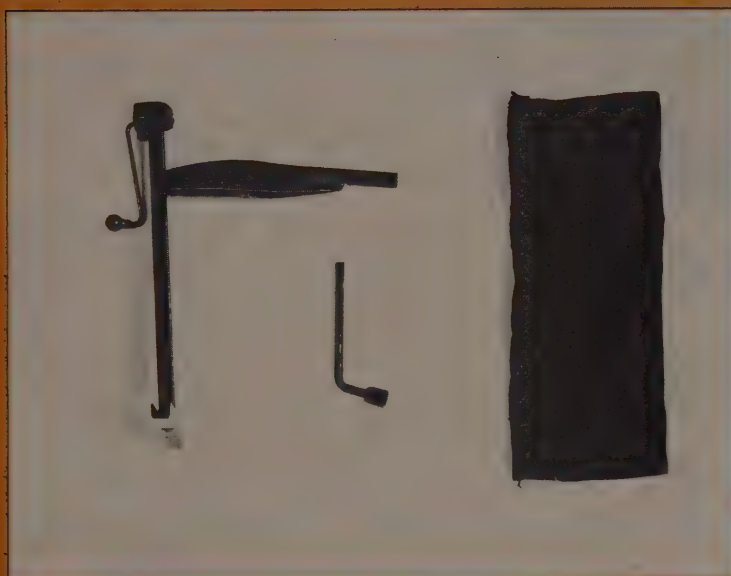
BL

Rover and Jaguar models

What you get 7 open-ended spanners; insulated pliers; cantilever jack; combined wheelbrace/jack handle; tyre-pressure gauge; feeler gauge; plug spanner/tommy-bar; screwdriver with cross- and flat-bladed bits

Nice to be able to pat BL on the corporate back—the best kit that DRIVE found, bar none. Spanners may be dull black instead of shiny chrome vanadium, but 'more and cheaper' is of greater use to the car-owner than hidden glitter. It would be hard to find better pliers (German made) at any price. Jack lets the kit down for needing to be wound up from the ground before locating.

AA comment Almost there—an object lesson to all.



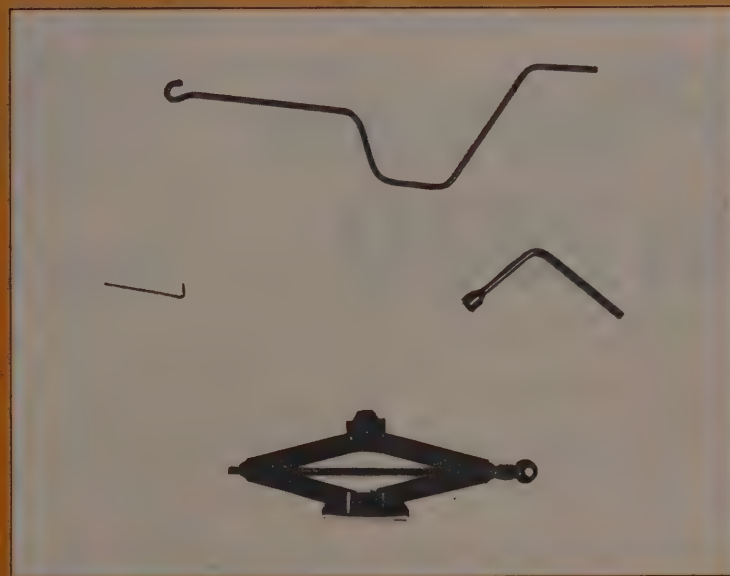
FORD

Standard kit with all models

What you get Pillar jack; wheelbrace

Whatever Ford you drive, you're expected to do nothing more than change a wheel. If you want more, you'll have to buy it from the vast Motorcraft range of service tools. Jack is easy to use, but you must angle it perfectly to avoid fouling the body or tipping too far out when it's wound up and down. Wheelbrace could be longer to deal with tough nuts.

AA comment The absolute minimum—Ford (like Vauxhall) doesn't believe in self-help. And it's all packed in a rough hessian bag with no fixed location in the car.



CHRYSLER

Standard with all UK models

What you get Scissors jack; bent-wire posing as jack handle; wheelbrace; another piece of bent wire

Chrysler wins the wooden spoon: even this most-basic of kits is below par. Scissors jack has to be wound up from the ground, with awkward hook-and-eye handle, then located in chassis holes by trial and error. Cranked handle has two different axes, ostensibly for greater leverage, but in practice it makes a wobbly operation more wobbly.

AA comment Thoughtful of the company to provide a 'metal thingy': while you are waiting for the AA patrol, you can use it to pick your teeth . . .

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WITH RENEWED interest in the controversy over the compulsory use of seatbelts, DRIVE's Special Offer is a timely reminder that every child carried in the car should have a safety restraint. The new Britax Playsafe is the ideal system for the tot who doesn't take kindly to being belted up, allowing children over four years old to sit in the normal rear seat and be protected by a clever polystyrene play-'shelf', held in place at waist-level by a lap belt.

Not only does the Playsafe meet all the stringent British Standards Institute requirements, it has also earned a coveted AA Seal of Approval. And DRIVE readers can obtain the Playsafe for a limited period only for £12.95—that's up to £7.50 less than shop prices.

Don't delay. Send the completed coupon, with a cheque or PO made payable to the AA. The offer, available only to readers in Gt Britain and N Ireland, closes 31 May 1979.



WHAT'S NEW

Eternal flame

ANYONE who has ever taken emery paper to a corroded sparkplug gap will rejoice in the news of the everlasting plug. And The Master Ignitor is guaranteed for the life of a car or commercial vehicle, or for 100,000 miles—for which it won the prize as the most interesting exhibit at the *Auto-mechanika* show in Frankfurt, W Germany.

American makers Laser Nucleonics is being coy about its brainwave, saying only that it features an electrode configuration, and radical changes in materials, 'resulting from developing laser technology'.

You never miss the water until the screen-wash reservoir runs dry—which is usually when you need it most. So a Bracknell, Berks, firm has come up with Wash Monitor, a gadget that gives warning of impending windscreen drought.

Wash Monitor consists of a self-adhesive sensor pad connected to a facia-mounted warning light. You simply stick the pad to the outside of the reservoir at whatever level you consider to be dangerously low... and when the fluid falls below that, the warning light comes on.

The Monitor won't work on metal reservoirs; but, provided containers are of rigid plastic, polythene or glassfibre, it can also be used for freshwater tanks on caravans and boats.

One swallow may not make a summer, but one good summer (1976, remember?) certainly gave a fillip to the sunshine-roof business in the UK. There are now any number of companies anxious to cut a hole in your car and fit a quick-action sunroof... and join the lively debate, with some vehicle manufacturers, about structural safety and British Standards.

Laddaw Ltd is the sole importer of the Amilite Sky-Lite range—'tinted solar cool glass opening panels' set in a one-piece, black-finish aluminium frame, designed and proved in the US.

The glass panel—and indeed the two, side-by-side 'individual' panels in the Sky-Twin-Lite fitted to a DRIVE Princess 1800HL—tilt for fresh air without draughts, and can be removed altogether.

Good-looking and neat-fitting, the roof in our car has so far met almost all the claims made for it by a proud importer. Only problem (and one that astonishes and baffles Laddaw, which suspects a 'rogue' sample) is that, though the £199 Sky-Twin-Lite will pass through a carwash with impunity... it leaks in rain.

More anon, when Laddaw investigates.

Letters

Views to air? Tell **DRIVE** about your motoring and what it means to you. You can send letters for publication—unstamped—via **DRIVE Directory**, **FREEPOST**, Basingstoke, Hampshire

On the road—1

At the time when Transport Minister William Rodgers wrote to **DRIVE** (November–December issue) about road-spending cuts, the counties of England and Wales were putting in their budget plans for transport for next year—and nearly all gave a blunt warning that the fall in maintenance standards represented a threat to motorists and other road-users.

Two counties, East Sussex and Tyne and Wear, say that the number of insurance claims against each has risen by 35% over the past three years; in Bristol, the increase has been five-fold in a two-year period, while Devon reports that accident claims there shot up 25% in one year alone.

The government has itself confirmed that 28% of all accidents can be attributed to 'deficiencies in the road environment'. Surely Mr Rodgers should take into account the increasing burden of accidents on tax—and ratepayers?

No one can say that cutting county road-spending by £1000 million a year isn't making a difference. Accidents apart, you can be sure that the motorist is paying more than ever before in maintenance charges because of potholes and ruts. Bus operators report a vast rise in the replacement of bus springs alone—in Dorset, it's four times as high as it was a few years ago.

Robert Phillipson
Director,
British Road Federation, London

On the road—2

Mr. Rodgers says he does not believe that responsible highway authorities would spend less on road maintenance than necessary for safety and structural stability from their available funds. He conveniently forgets that, on government orders, they have to subsidise first the *buses* from the funds, and can spend only the remaining small fraction on roads.

The government is spending £200million a year on job-creation schemes. If this money were spent on road maintenance, no more would be spent than at present. It would only be a re-direction of money that would create *real* jobs, would make use

of existing skills, reduce unemployment and increase the gross domestic product without causing inflation.

The pious words of Mr Rodgers cannot hide the fact that our roads are dying, and that our money is not rightly spent.

Paul S W Bryant
MSC, MICE, FIAE, FSCE, MCS
Chartered civil engineer
Northampton

Intense interest

Recent **DRIVE** correspondence on high-intensity rear lamps has concentrated on cars, but what about heavier vehicles? I am consistently amazed at the pinhead-sized rear lamps fitted to 35cwt vans—and even juggernauts. My Citroen 2CV has better lighting—back and front—than many of these.

D Bennett-Hughes
Todmorden, Lanes

Guise 'n' dolls

So that's a City slicker on the cover of **DRIVE**, is it? Well, thank Heaven I don't work in the City: I should hate to rub shoulders with what looks like a blonde woman dressed up as a man, complete with high-heeled shoes. Very bad taste to associate this creature with motor cars.

L Glen
Wickhambrook, Suffolk



Val Owen, 22, the blonde on our last-issue cover, replies: 'If dressing up like a bloke for **DRIVE** is getting me a bad name, I'd better stick to adverts for shampoo. But if it's any interest to Mr Glen, I've never seen a City slicker that I fancied, either ...'

Blowin' in the wind

After reading how polluted air damages a car's paintwork, I would like to see more emphasis in **DRIVE** on the need to reduce the poisonous and deadly fumes emitted from car engines, including the effect of the lead content in petrol and asbestos in brake linings. Why is it that the US and other countries are always first to take action, and we only follow?

G T Smithyman
Derby
Regulations limiting the lead content in petrol already exist, and further measures are to be introduced in a few years as part of our obligations to European legislation. DRIVE, in its very first issue, in Spring 1967, campaigned for more stringent controls of exhaust

Silvair Motoring Holidays in France—Summer 1979.

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emission and discussed the 'menace to public health' of carbon monoxide in traffic fumes—Editor.

Mastic mistake

I am concerned at DRIVE's misuse of the term 'bitumastic' to describe the rust-prevention treatments supplied on the Chrysler Avenger and Austin-Morris Princess that failed to impress in recent car tests. 'Bitumastic' is our registered trademark; you should have used the word 'bituminous'.

As we make a product that is suitable for rust prevention of motor vehicles, this sort of reference is, to say the least, unhelpful!

G M Watson

Wales Dove Bitumastic
Hebburn, Tyne and Wear

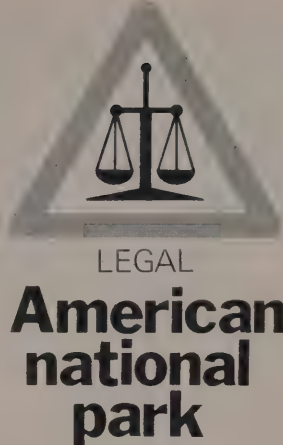
Honest facias

The 'threat' that car facias will soon look like aircraft flight-decks, with masses of dials and digits, fills me with horror. It's bad enough already, with the completely nonsensical design of switches. Oh, how I yearn for the old days, when the words 'choke', 'lights' and 'screen wipers' were clearly indicated.

My Ford Escort has three switches and it's all too easy to put on the wrong one.

Leila S Mackinlay

London, W1



ON THE STRENGTH of a modest Pools win, John Hawkers thought it time he exchanged his five-year-old Mini for something more powerful and head-turning. But his delight in acquiring a second-hand Cadillac soon turned sour.

A little nervous of leaving the US monster at the kerb on a busy Saturday while he went to meet his wife, Hawkers decided to park in a nearby multi-storey carpark. He had just reached the top of a ramp, on a bend, when a small boy jumped out of a parked car in front and ran into his path.

Hawkers spun the wheel and braked. But it was too late. He couldn't avoid clipping the child with the offside wing.

In the pandemonium that fol-

lowed, Hawkers kept protesting: 'It wasn't my fault.' But the boy's father thought otherwise. 'You were driving this thing like a maniac,' he shouted accusingly. And when Hawkers admitted that he had only just bought the car, the father insisted on calling the police. They promptly breath-tested Hawkers, but then, to the father's chagrin, let him go.

'I'm afraid the Road Traffic Act doesn't normally allow us to prosecute for careless or reckless driving in a carpark,' the police sergeant explained. 'The charges apply only to offences committed on the roadway. And a carpark is not usually part of the road.'

The child's parent was outraged. 'Do you mean to say that a chap driving without thought to anyone else cannot be prosecuted, just because he's in a carpark?'

'Oh, he *can*,' replied the sergeant patiently, 'if, for example, his blood/alcohol level is found to be above the prescribed limit. In this case the breath-test was negative. But, if a motorist commits a drink-drive offence in a carpark adjoining a public road, for example, he could be just as liable for prosecution as if he'd committed it on the road.'

The AA confirms this apparent anomaly. Says Head Office legal manager Jack Smith: 'If Hawkers was at fault, one can sympathise with the father's indignation, and

even with his desire for retribution; but, as the law stands, in this case the driver hadn't committed any criminal-offence.'

He goes on to point out that the father could, on behalf of his son, have sought redress through the civil courts, claiming damages for negligence. 'He may have had a stronger case, certainly, if there had first been a criminal conviction against the defendant. He might even have had a case against the carpark owners, for under the Unfair Contract Terms Act 1957, the owners, too, could have been nailed had they failed to exercise their "common duty of care".'

'But liability is difficult to prove against owners unless there have been several similar complaints or accidents, and they can be shown not to have done anything about preventing a recurrence.'

In the event, the father sued in the county court and was awarded £200 damages and costs. The boy was kept under observation in hospital for a few days.

Though Hawkers' insurance company paid up, the joy in his modest Pools win evaporated as he faced the fact that he was perhaps not meant to be a Cadillac owner. He sold it, and got barely half what he had paid for it.

As one disinterested buyer after another told him: 'Well, where would you park it?'

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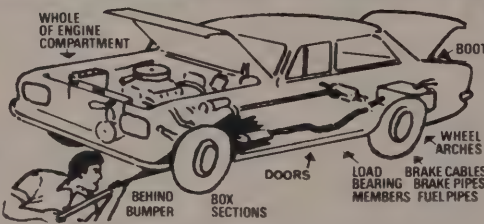
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WHY BIG WORLD USERS TRUST WAXOYL RUSTPROOFING

WAXOYL DOES AS IT SAYS. Kills rust. Users report: SWISS GOVT. LAB TESTS: 'Rust stopping qualities very good'. CITROEN CAR CLUB 'Fantastic stuff'. BRITISH STEEL CRPN: 'Most satisfactory'. SWISS AUTO RACING A.G.: 'Clean, easy application. No after-cleaning'. WESTERLY MARINE, PORTSMOUTH: 'Waxoyl protection excellent on marine diesel oil tanks'. (Tank bases otherwise impossible to rustproof, standing on supports). MOTOR MAGAZINE 'Remains active indefinitely'. CHRYSLER CENTRE, BASEL: 'Application so clean. Entirely satisfied'. ROVER SPORTS REG. MEMBER: '197,000 miles. No sign of Waxoyl penetration'. LEICESTER 'On '72 Beetle,

since new: extremely satisfied'.

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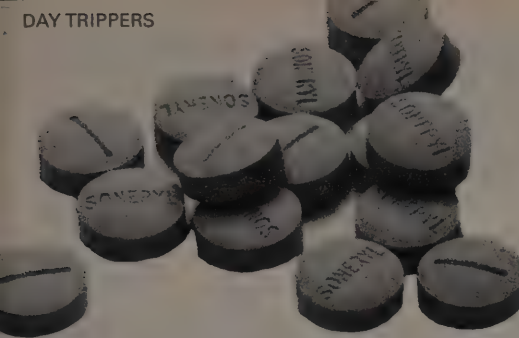
TRAIL OFFER: 500 ml (88pt) TIN for your trigger oil can test behind chrome strips (or brush on door edges, free brake linkages, etc). Watch Waxoyl chase water off a simple metal strip. Quite amazing! Send 85p add 58p.

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tests were not yet available to identify many of the drugs. But, since then, the situation has changed considerably, and the Metropolitan Police forensic science laboratory now offers a facility for drug analysis with a sample of blood that has shown a very low or zero alcohol level.

Already that facility has encouraged an increase in the number of samples being sent for drug analysis. The laboratory that covers London, Kent, Sussex, Surrey, Hertfordshire and Essex now handles 200 blood samples a year, compared with 100 two years ago, and the number will increase further as the police become more aware that drugs, as well as drink, are likely to impair driving.

The laboratory staff is doing what it can to spread that awareness. It lectures police on the need to watch for drugged drivers where drink does not appear to be the problem, and tells them the signs that should arouse suspicion. And, when a sample shows a 'legal' or borderline alcohol level, it is now routine to send a circular with the report suggesting that drugs may have been mixed with drink.

If, subsequently, police want an analysis for drugs, they are asked to state whether drugs were found in the driver's possession and, if so, what they were; what was his condition (drowsy, asleep, agitated); whether he was prescribed drugs by his GP and, if so, which; when was his last dose; and how long had he been taking them?

Illustrating the motorist's dilemma, Dr Raffle says: 'It is a driver's responsibility not to drive while his ability to do so properly is impaired by illness or the treatment for it. But that responsibility cannot be exercised effectively unless he is given the necessary guidance by his doctor or pharmacist—preferably both.'

'And that guidance cannot be given effectively unless the data sheets about drugs that, by law, all doctors and pharmacists must receive state that they *may impair driving*. They seldom give such a warning because it is difficult to back it up with evidence which, in turn, needs further research. It's Catch 22.'

Certainly many motorists seem to be totally unaware of the dangers they may face from their medicines, particularly medicines mixed with alcohol. Dr David Filer, a police surgeon for nearly 15 years, serving Hammersmith and Fulham stations, says: 'Only a few of the drivers that I examine actually say that they have been warned by their doctors not to drive if they mix alcohol with drugs affecting the central nervous system. The majority

tell me they have not been warned, and, while some may be covering up, some obviously are telling the truth.'

'One of the most common drugs of this nature is Valium. Its data sheet states clearly that patients should be instructed to avoid alcohol while using it, since an individual response cannot be foreseen. It adds that, like all medicaments of this type, Valium may modify patients' reactions, driving ability and ability to operate machinery.'

Dr Filer believes that any doctor who prescribes Valium without warning a patient about possible side-effects is guilty of negligence. And negligence in this area can have serious consequences, as the following case-histories from his experience as a police surgeon show.

Case one A businessman had been manning his firm's stand all day at a trade exhibition. To relieve tension, he had taken some tranquillisers, and finally a couple of small gins. As he drove home, a police patrol car crew saw him switching from lane to lane with unusual abandon and at excessive speed. A breath-test produced a negative result, but a blood sample confirmed the small level of alcohol and tranquillisers in his system.

Case two A patrol car crew spotted a girl scraping her car against two parked vehicles and driving on erratically. She was chased and stopped. When she got out of the car she staggered and her speech was slurred. The breath-test was borderline—she'd had two half pints of beer—but she admitted that she had been taking Mogadon—a sleeping pill—and analysis revealed that it was still in her blood.

Case three A housewife nearly knocked down a pedestrian on a zebra crossing. Police stopped her and she said that she had had a couple of sherries with friends. But asked whether she had been taking any prescribed drugs, she replied: 'Only antihistamine for my hay fever.'

All three drivers said that they had not been warned by their doctors about the danger of taking their drugs with even a small amount of alcohol. And the probability that tens of thousands could say the same thing was suggested in a report on sleep in this July's issue of *Which?* Of 430 Consumers Association members reporting, three-quarters had seen their doctors about sleep problems. Nine out of 10 had been given sleeping pills or tranquillisers, and the magazine stated: 'Very few doctors gave warnings about the side-effects of the pills they prescribed.'

More may be encouraged to do so by *Medical Aspects of Fitness to Drive*, a Medical Commission on Accident Prevention booklet that the BMA has now persuaded the Department of Transport to send to all doctors. It contains a chapter on drugs and driving by Dr John Havard, principal deputy secretary of the BMA and author of a United Nations report on alcohol, drugs and driving.

It carries advice for doctors, and describes how a wide variety of drugs may affect drivers: 'The very large numbers of

prescriptions for sedatives and tranquillisers, running into tens of millions each year in this country, together with the fact that 19 million people have driving licences, suggests that a substantial proportion of the population must drive at some time or other under the influence of central nervous system-active drugs.'

Dr Havard points out that, after most general anaesthetics, it is safer for a doctor to advise against driving for 48 hours. Most pain-killers—aspirin, paracetamol, phenacetin, for instance—are unlikely to impair driving, but some may be less safe than others. Distalgesic, for example (for which there were 3,680,000 prescriptions in 1973), is a combination of paracetamol and dextropropoxyphene; the data sheet for Distalgesic contains no warning about driving, but that for Doloxene—a proprietary dextropropoxyphene preparation—contains a specific warning.

'The public,' confirms the Police Surgeons' Dr Clarke, 'is mostly unaware of the fact that, when the maximum "benefit" of a drug has worn off, the residual effect still present may impair driving ability even though a person may feel perfectly fit...'

In an age when it seems as if every other person is on daytime tranquillisers or night-time sedatives, or both—never mind more-exotic drugs—it's about time we woke up to this fact among many others.

Before the next day-trip becomes the final one...

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The tough yet highly flexible tyre absorbed most road surface bumps to give a smoother, more relaxing ride. In fact our test drivers were more shaken by the P3's amazing performance than the cobble stones and granite blocks we made them drive over.

At the end of our tests, we had proved that the P3 had a combination of all three major motoring benefits in one tyre. Mileage, grip and comfort.

So we simply called it 'the best tyre for you'. And we think we've got a pretty watertight case for saying it.

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USED-CAR PRICE GUIDE Autonomy

MOST secondhand buyers have an inbuilt prejudice against automatic cars, especially in the sub-2litre market—wary of their thirst for petrol, 'sluggish' performance and repair bills when things go wrong. But the experts know better, and at least one major police force has reaped substantial benefits by switching from manuals to automatics.

The Swedes found that their manual cars, each driven by many different large-footed gentlemen, suffered excessive clutch wear; since going over to automatics, their transmission-repair bills have been halved.

They also found that the Saab automatic was only a split-second slower than the manual version over important speed ranges. More to the everyday-motorist point, when they tested 10 'average' drivers, all were far, far quicker off the mark in automatics than in manuals. And fuel? That fell from 38mpg to 34mpg.

If you are convinced that an automatic is for you, it is well worth making the following checks—where applicable—before parting with money.

Make sure the car starts only in P and N, and that the reverse light operates only in R.

On the test drive, check that the car goes smoothly through all its gears on a light throttle. Shifts should also be silent: 'clunks' point to the need for a new gearbox. The same goes for a full-throttle kick-down: driving with a badly-adjusted kick-down cable can result in a major repair. (Kick-down should come in just before the accelerator is floored.)

You should also go through the gears using manual over-ride to test the effect of engine-braking. If performance from rest is poor, seek a garage check on the 'stall speed' to determine the condition of the torque converter—a few seconds' work with a rev counter.

As to price, our list contains 100 of today's most-popular models in the UK. Specifications are compiled from AA road-test reports, the numbers and issue dates of which are shown in the table.

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MAKE AND MODEL	£ latest new price	AA Road Test Report No	Date	engine cc	mean top mph	acceleration 0-60 in sec	overall mpg	insurance group	MODEL YEAR						
									Average secondhand price guide						
									1977	1976	1975	1974	1973	1972	1971
Alfa Romeo Alfased SE	3100	354	9/74	1186	92	16.1	32.5	4	2150	1785	1465	1185	—	—	—
Audi 80 L	4097	389	6/76	1297	91	14.2	31.75	5	2925	2330	1860	1490	1165	—	—
Audi 100 LS	S	314/R1 139	1975	1761	100	12.7	29.25	5	—	2600	2105	1760	1340	1090	895
BMW 1602 Lux	D	363	1/75	1673	94	14.4	29.0	6	—	2525	2105	1910	—	1190	1040
BMW 520i	6749	327	12/73	1990	111	9.7	29.0	S/R	5695	4705	3765	3020	2380	—	—
Chrysler Imp de luxe	D	258	9/71	875	78	20.0	36.0	1	—	1155	995	850	720	610	510
Avenger 1300 2-door	D	337	4/74	1295	83	19.0	30.5	2	2095	1540	1320	1120	—	—	—
Avenger 1600 GLS auto	3774	339	5/74	1600	93	13.9	26.5	4	2675	2045	1740	1470	—	—	—
Alpine S	3797	381	4/76	1442	97	14.3	32.0	5	2875	2440	—	—	—	—	—
Hunter GL 4-door	3448	234	1/71	1725	86.5	15.0	28.7	3	—	1815	1545	1320	1105	930	775
Sceptre Mk3 auto	D	169	10/68	1725	97	14.1	28.6	4	—	2100	1785	1500	1260	1045	860
Chrysler 2litre auto	4325	308	5/73	1981	102	13.2	24.0	5	3095	2255	1835	1440	1115	—	—
Simca 1100GLS 5-door	2761	298	1/73	1118	85	16.5	33.25	3	1845	1565	1325	1110	930	770	625
Citroen 2CV6	1767	R1 118	1975	602	66	37.2	44.0	1	1275	1060	895	—	—	—	—
Citroen Dyane 6	1950	366	3/75	602	70	29.5	47.0	1	1360	1100	935	780	650	535	435
Citroen GS1220 Club	3099	384	5/76	1222	93	17.2	33.0	4	2145	1745	1440	1180	955	—	—
Citroen CX2000	4967	416	5/77	1985	107	12.7	29.25	6/7	3345	2725	2330	—	—	—	—
Colt Lancer 1400 GL 4-door	3249	371	11/76	1439	94	12.9	34.0	5	2240	1805	—	—	—	—	—
Daf 66SL	S	317	9/73	1108	79	23.5	29.0	3	—	—	1100	935	790	—	—
Datsun Cherry 100A 4-door	S	284	8/72	988	83	17.7	41.25	3	—	1625	1395	1190	1010	850	715
Datsun 120Y coupé	2982	336	3/74	1171	86	17.7	39.0	4	2210	1895	1610	1365	—	—	—
Datsun Violet 140J	2877	R1 132M	1975	1428	94	15.5	32.0	4	2090	1870	1500	1260	—	—	—
Datsun Bluebird 180B	3257	316	8/73	1770	104	12.3	27.0	5	2250	1915	1620	1360	1135	940	—
Fiat 126	1640	334/R1 138	2/74	594	62	60.0	48.5	1	1190	1030	895	765	655	—	—
Fiat 127 3-door	2368	R1 137M	1975	903	82	18.4	41.75	2	1670	1430	1220	1030	880	—	—
Fiat 128 4-door	2530	320	9/73	1116	86	15.5	34.0	3	1735	1480	1260	1065	900	755	630
Fiat 131 1600S	3365	369	6/75	1586	94	13.6	32.0	5	2390	2200	1705	—	—	—	—
Fiat 132 1800GLS	S	360	1/75	1756	102	12	25.0	6	—	2040	1680	1510	—	—	—
Ford Fiesta 1000 HC	2260	417	4/77	957	83	18.4	41.0	1	1925	—	—	—	—	—	—
Ford Popular 1.1	2253	R1 136M	1975	1097	77	23.6	35.0	1	1785	1535	1325	—	—	—	—
Escort 1300XL 4-door	S	292	11/72	1297	88	16.0	31.0	2	—	—	1495	1290	1100	940	800
Cortina Mk3 1600XL 4-door	S	323	10/73	1593	95	15.1	27.0	3	—	1965	1685	1435	1225	1030	875
Cortina 2000E Estate	S	347/R1 116	1974	1993	99	12.3	27.5	5	—	2625	2180	—	—	—	—
Capri Mk1 1600GT	S	342	6/74	1593	102	12.4	27.5	5	2980	2515	2170	1945	—	—	—
Capri 3000 Ghia auto	S	R1 114	1974	2994	113	9.9	22.0	6/7	4320	3625	3040	2645	—	—	—
Granada 3000 GXL auto	S	282	6/72	2994	108	11.7	21.0	6	—	—	2625	2030	1510	1065	—
Honda Civic 1200 3-door	2675	362	3/75	1169	86	14.7	34.75	4	1895	1615	1370	1160	—	—	—
Honda Accord auto	4040	420	5/77	1600	89	14.7	32.0	5/6	2865	—	—	—	—	—	—
Lada 1200	2056	355	9/74	1198	91	15.0	33.25	3	1400	1185	1005	845	—	—	—
BL Mini 850	2091	340	5/74	848	73	26.1	41.0	1	1530	1325	1050	905	770	655	555
Mini Clubman Saloon	2437	410	1/77	1098	82	18.2	40.5	1/2	1875	1605	1285	1095	945	805	680
1300 Mk2/3 4-door	D	239	2/71	1275	87.5	17.2	36.5	2	—	—	—	1075	925	790	670
Allegro 1300 Mk1	S	329	1/74	1275	86	16.0	34.75	2	—	—	1460	1230	1030	—	—
Allegro 1300 Mk2 4-door	2905	377	2/76	1275	85	19.0	37	2	2150	1815	—	—	—	—	—
Allegro 1500 Estate	3212	R1 127M	1975	1485	90	16.6	34.25	3	2460	2120	1825	—	—	—	—
Maxi 1750 Mk2	3449	263	1/72	1748	90	14.6	28.75	3	2490	2035	1730	1465	1225	1025	855
Princess 1800HL	S	397	8/76	1798	96	14.2	29.75	4	2625	2175	1900	—	—	—	—
Princess 2200HL	4390	R1 129N	1975	2227	105	12.7	26.5	4	2705	2200	1925	—	—	—	—
Marina Mk2 1.3 4-door	2822	392	7/76	1275	85	18.2	33.0	2	2160	1835	—	—	—	—	—
Marina Mk1 1.8 4-door	S	295	1/73	1798	96	12.8	31.5	3	—	—	1625	1370	1150	960	795
MG Midget Mk3	S	205	2/70	1275	93	14.8	29.1	4	—	—	1235	1040	880	740	—
MGB Mk2/3	3773	243	4/71	1798	105	11.8	29.6	6	2825	2405	2030	1685	1415	1190	995
Jaguar XJ6 4.2	S	227	10/70	4235	117	10.0	16.75	6/7	—	—	—	3690	2380	1960	1635
Jaguar XJ12(L)	S	305	4/73	5343	136	7.6	13.0	7	—	—	4655	3765	2330	—	—
Rover 2200SC	D	324	11/73	2205	104	12.2	24.0	4	3640	3020	2455	2030	—	—	—
Rover 3500 auto	S	330	2/74	3528	112	11.1	20.5	5	—	3490	2775	2280	1760	1415	1165
Range Rover	9151	252	7/71	3528	101	13.2	18.0	5	8465	7525	6215	5000	4135	3420	2775
Triumph Toledo 4-door (Dolomite)	3140	345/R1 150	1977	1296	83	19.8	33.0	2/3	2325	1985	1510	1300	1115	950	—
Triumph Dolomite 1850	S	288	9/72	1854	100	11.4	28.25	4	—	2305	1935	1635	1365	1140	—
Triumph 2000 Mk2	D	219	6/70	1998	95	15.0	26.0	4	—	—	2255	1960	1390	1140	945
Triumph 2500 TC	D	R1 112	1974	2498	101	11.5	27.0	5	3590	2500	2355	2005	—	—	—
Triumph Spitfire 1500	3246	376	2/76	1493	97	12.5	35.25	5	2360	1985	1660	—	—	—	—
Triumph Stag	D	273	3/72	2997	118	10.2	22.5	S/R	5325	4360	3540	2875	2305	1835	1415
Triumph TR7	4268	401	11/76	1998	108	10.2	28.75	6	2900	2480	—	—	—	—	—
Mazda 1000 2-door	D	343	6/74	985	78	20.0	33.5	3	1500	1280	1085	920	—	—	—
Opel Kadett S estate 3-door	3043	338	5/74	1196	84	16.7	32.0	4	2235	1910	1620	1365	1010	845	700
Opel Ascona 1.9SR	S	302	3/73	1897	96	12.3	25.5	6	—	—	1905	1535	1220	—	—
Opel Rekord 4-door	S	287	8/72	1897	101	12.0	26.0	4	—	—	1835	1510	1265	1090	—
Peugeot 104 4-door	S	325	11/73	954	84	17.3	36.5	3	—	1610	1385	1175	1000	—	—
Peugeot 304	S	386	5/76	1290	92	16.7	35.5	3	—	1980	1680	1410	1180	975	800
Peugeot 504GL	4486	R1 140	1976	1971	99	13.7	27.75	5	3295	2775	2305	1910	—	—	—
Peugeot 504 estate	4902	275	4/72	1971	98.5	13.8	24.5	5	3890	3295	2750	2280	1885	1560	—
Reliant Scimitar GTE	7014	303	3/73	2994	118	9.1	21.25	7	5400	4385	3445	2850	2380	1960	1610
Renault 4TL	2296	R1 121	1975	845	74	26.4	39.0	1	1705	1460	—	—	—	—	—
Renault 5TL	2524	349	8/74	956	85	19.7	42.0	2	1945	1655	1415	1200	1005	—	—
Renault 5TS	3050	370	11/75	1289	93	13.3	36.25	4	2250	1925	1635	—	—	—	—
Renault 6TL (1100)	2794	364	3/75	1108	82	17.9	37.75	3	2010	1720	1470	1245	—	—	—
Renault 12L	S	385	5/76	1289	82	18.1	34.5	3	1995	1730	1490	1260	1050	915	750
Renault 16TL	3594	291	11/72	1565	93	15.1	29								

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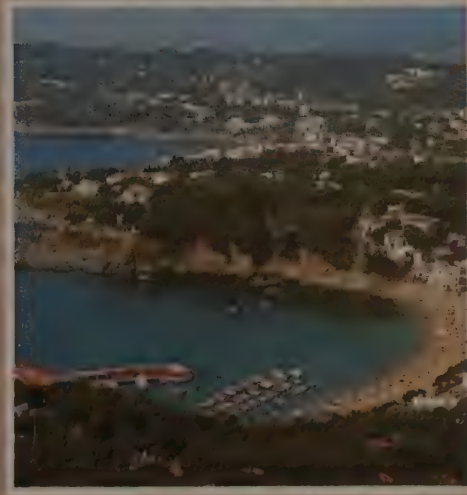
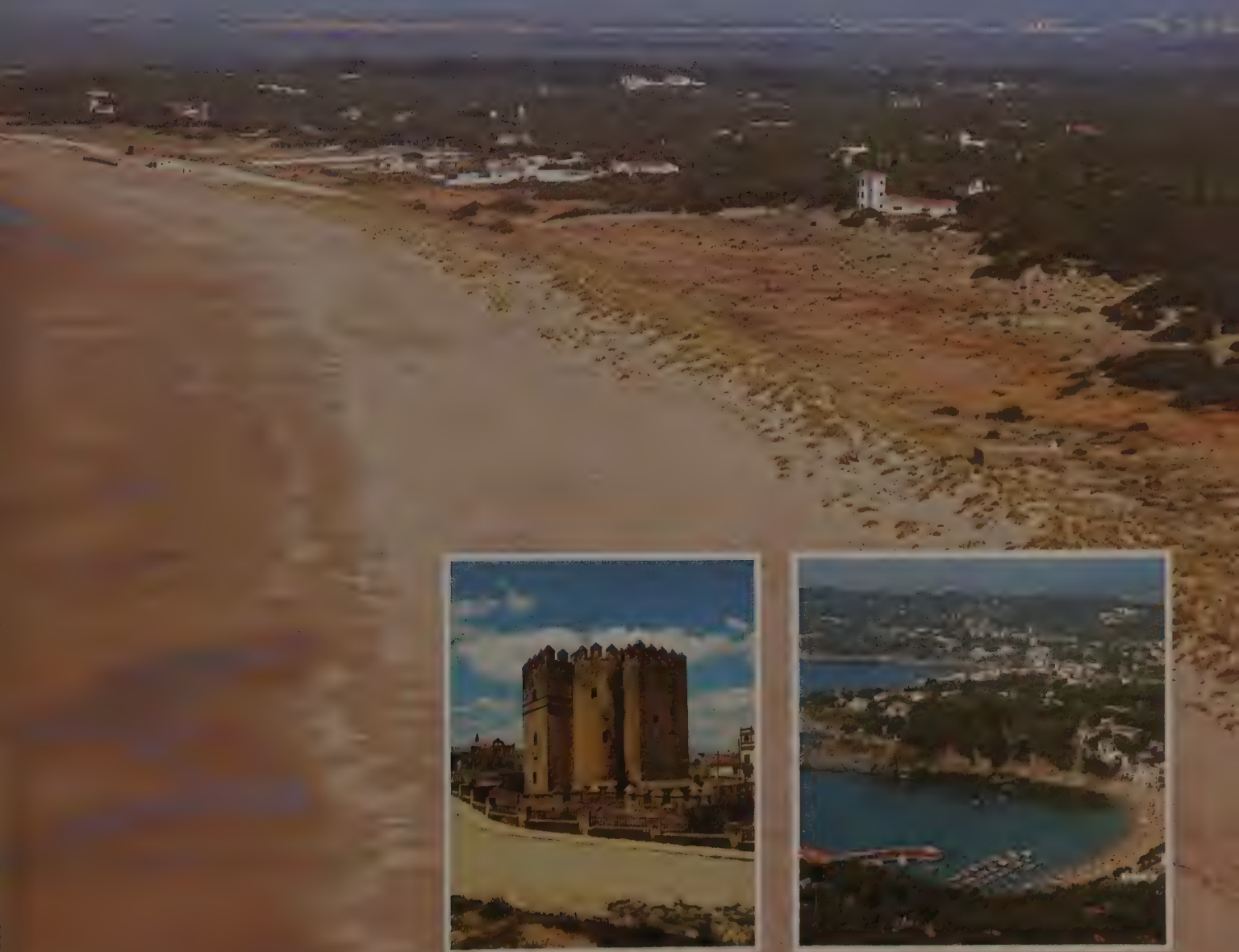
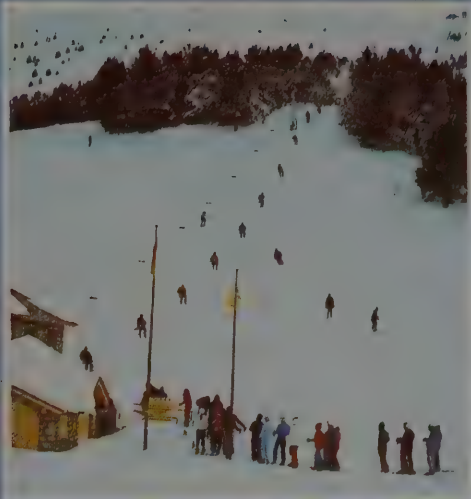
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DRIVE

AA

March-April 1979

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50p

Watch out!
There's a
lot of it
ab ut



**Do you stop as fast
as you go?**
See page 51

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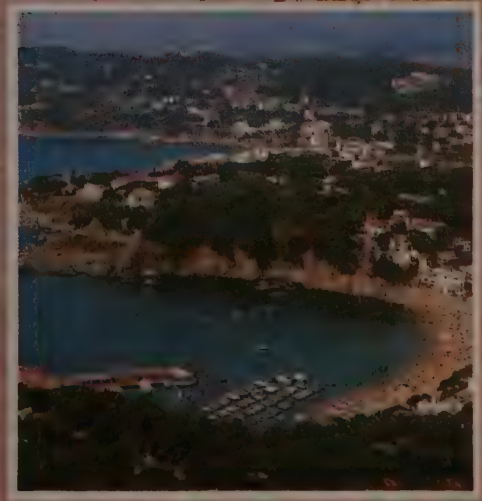
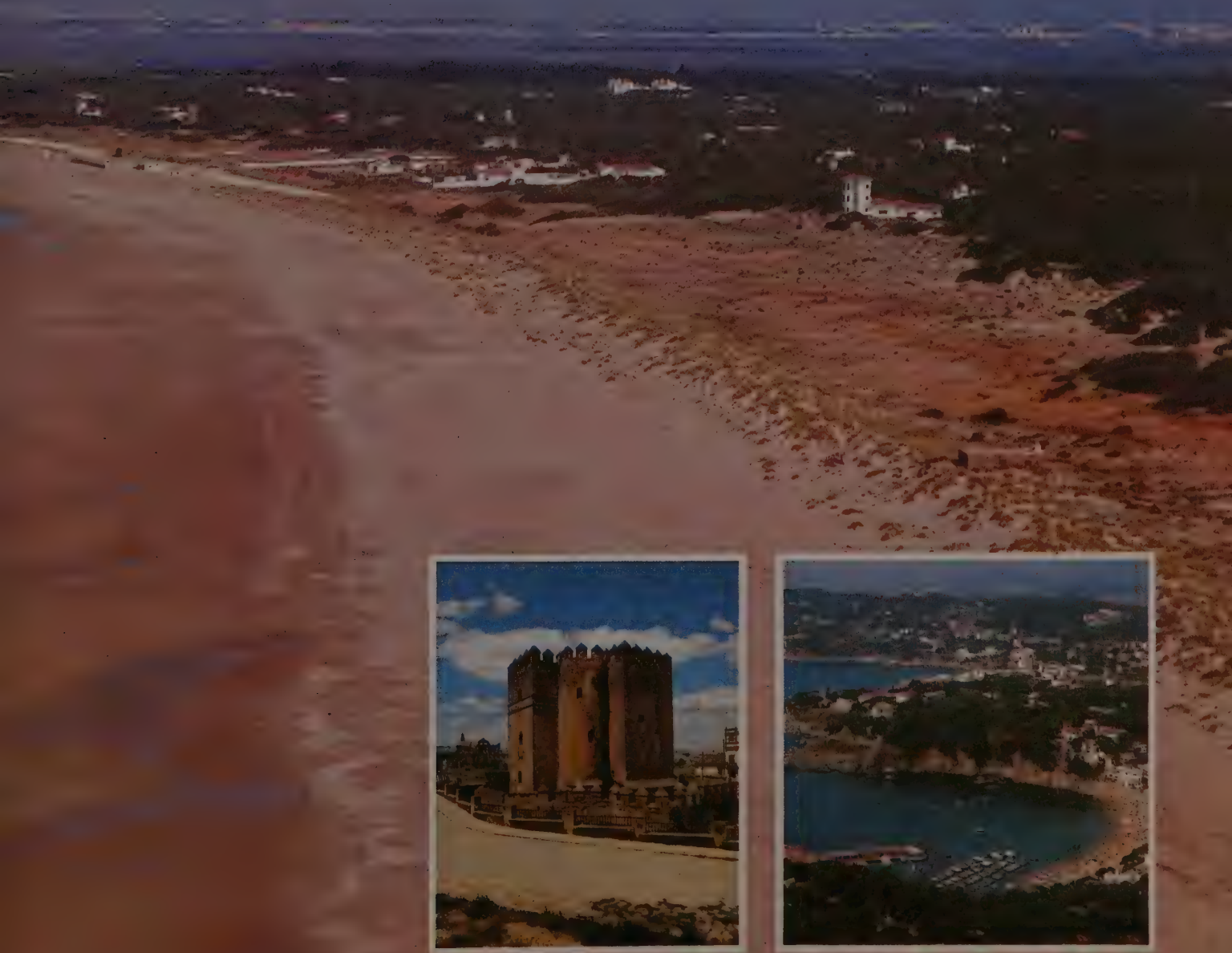
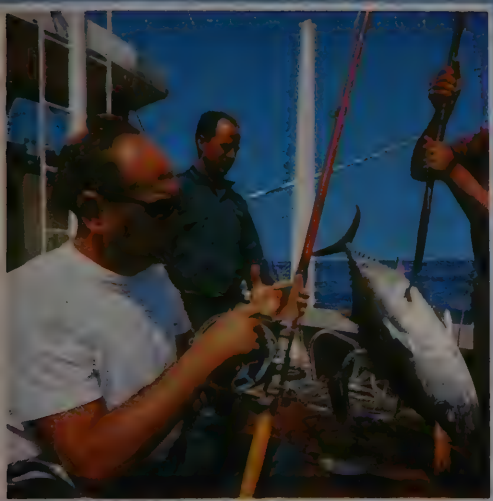
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 COVER picture by John Perkins. Toyota Starlet test report, page 19

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HOW LONG do you reckon to keep your car? Eighteen months, two years? Longer? Do you prefer to sell it before expensive trouble occurs, or 'run it into the ground' to squeeze every scrap of value from it. . . ?

DRIVE's latest long-term-test owner (see page 56) insists that her new car must last for at least 10 years, and explains why, in her view, that ruled out any British make . . . except, maybe, a Rolls-Royce. And the long-term health of cars from home and abroad gets extra scrutiny in this issue's Secondhand Review (page 36 onwards), where readers discover the pride and the problems that £1500 can buy in the used-car market of 1979.

Of course, all plans for a long or a short relationship with your car are thwarted if thieves move in on it, so all who have had their precious wheels stolen will react strongly to our disturbing report on pages 32-34. And pride of ownership can also end—abruptly—if the car brakes behave with a mind of their own; so readers who have so far given the car thieves the slip can alarm themselves all over again with Mike Hill's investigation, starting page 51.

Another way to go in search of (at

worst) the Big Exit or (at least) a fender-bender is explored on pages 8-9, where a W German Audi tangles with a tank; and garageman Arnold Handley tells how equally deflating it can be trying to play Car Doctor to 'yer average motorist' (page 54).

Then, naturally, there's the DRIVE Clinic (pages 28-29) . . . and SuperSix car tests (pages 16-22, 40-46) . . . and our unique Index of Motoring Costs (page 10) . . . and used-car prices (page 63) . . . and the regular departments of Law, Mechanic, Insurance, Holidays, Motor Sport, Money and the rest (including a new column from the office of the AA's chief engineer—page 25) . . . plus a Special Offer (page 15) that'll keep your car happy for as long as you're happy to keep it.

Yes, folks—once again we seek to serve and amaze you with a mixture that fully supports our cover boast: The motoring magazine that's so different. When you've read it, please tell us how you've liked it, and what else you'd like us to write about. For you.

— the Editor

Monitor

Gunning for you!

It's astonishing to realise that the police have been up to speed-trap tricks with radar meters for almost a quarter of a century. PETA—the familiar, grey-box Portable Electronic Traffic Analyser, not half as friendly as its name—went into service in N Ireland in 1956, and has since tracked hundreds of thousands of motorists into the courts; 15,000 of them in the London area alone in 1977.

Now PETA is to be scrapped, overtaken by new technology in the shape of the Muni Quip T3, the Kustom HR8, the Gatso Mini and the Truvelo Speed-meter—trendily-named, and trendily-priced, radar guns and gadgets to crowd a police armoury of speed detectors alongside such established exotica as VASCAR (Visual Averaging Speed Computer and Recorder).

The Muni Quip and Kustom are hand-held devices, look a bit like ladies' hair-dryers, are made in Canada and the US respectively and cost about £800 each; the Gatso Mini and the Truvelo Speedmeter are made in Scotland and S' Africa and are somewhat less-novel kerbside equipment, priced at £1800 and £3000 each. The Muni Quip, in particular, is already in use in Derbyshire, Sussex and the Thames Valley, and trials now under way with the Metropolitan police will, if they prove successful, undoubtedly lead to its adoption by forces in many parts of Gt Britain.

Speed limits and their enforcement have always been contentious subjects: they date back to the earliest days of motoring, and were the real reason behind the AA patrol's snappy salute—if he didn't greet you, it meant there was a speed trap down the road. Now, the marketing in this country of new-technology speed-metering devices gives further cause for alarm. As the Director

General of the AA, Mr O F Lambert, wrote to the Home Secretary recently: 'The Association has no brief for the law-breaker, nor does it wish to make the enforcement of road-traffic laws any more difficult for the police . . . but we do view with considerable concern recent developments in speed detection, and the apparent lack of central control of the adoption of sophisticated devices . . .'

In particular, as Mr Lambert went on to stress, the AA believes that 'the way in which such devices may be offered to and adopted by individual police forces for the provision of evidence of speed-limit offences may not be in the overall public interest.'

The situation, simply, is that, with the Home Office involving itself only in the use of PETA and, perhaps, its successor, there is no independent central authority engaged in testing the accuracy and reliability of all the other radar devices currently on offer, nor involved in advising forces on their use. *The disquieting fact is that it is those who sell the devices—those directly interested in profiting from them—who offer the only advice and instruction available to the police, and who provide, in court, any supporting evidence that may be required.*

The importance of a central authority, such as the Home Office, involving itself in the use of electronic gadgetry by the police surely cannot be overstressed. Neither the motoring public nor magistrates who sit in judgement are in any position to question the accuracy of evidence supplied by sophisticated machines, nor the manner in which they have been used.

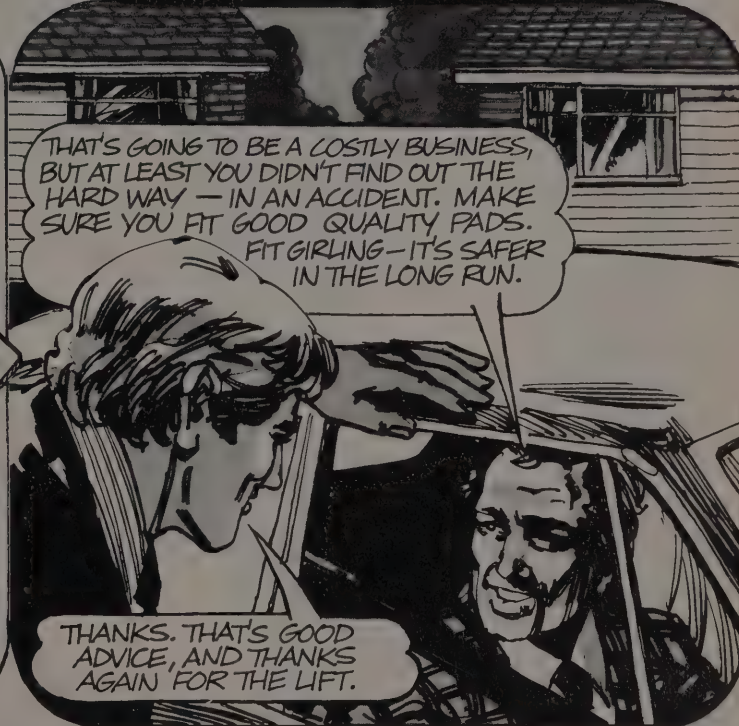
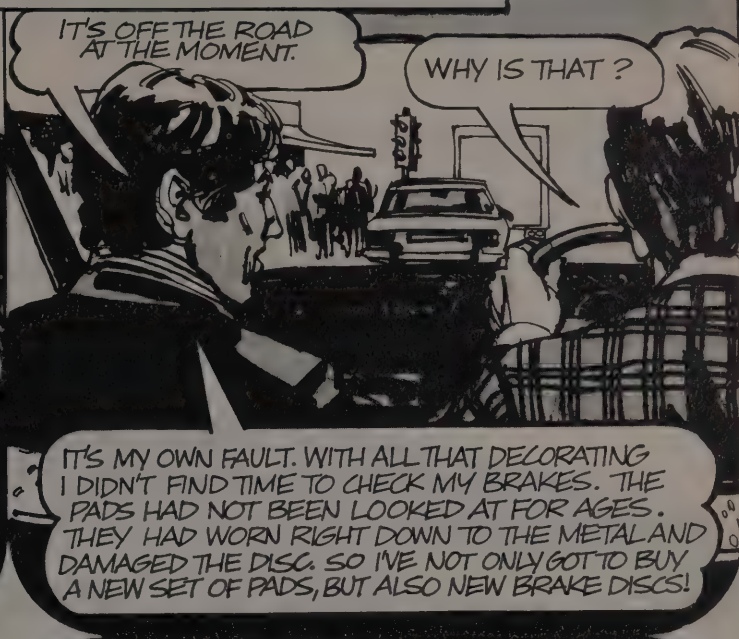
But, to date, the Home Office indicates no desire to involve itself in the sale to the police of the proliferating ray-guns and suchlike, nor does it wish to take a strict, procedural interest in their use. And this, the AA believes, is a mistake . . . for its own tests of the Muni Quip T3 indicate that it is susceptible to interference from unexpected

continued on page 7

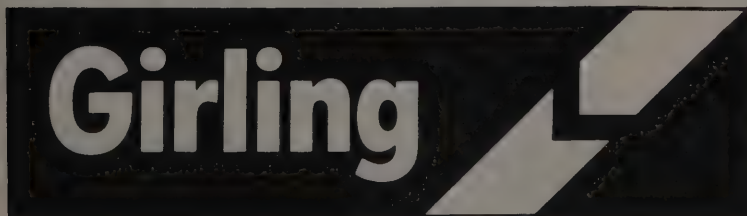


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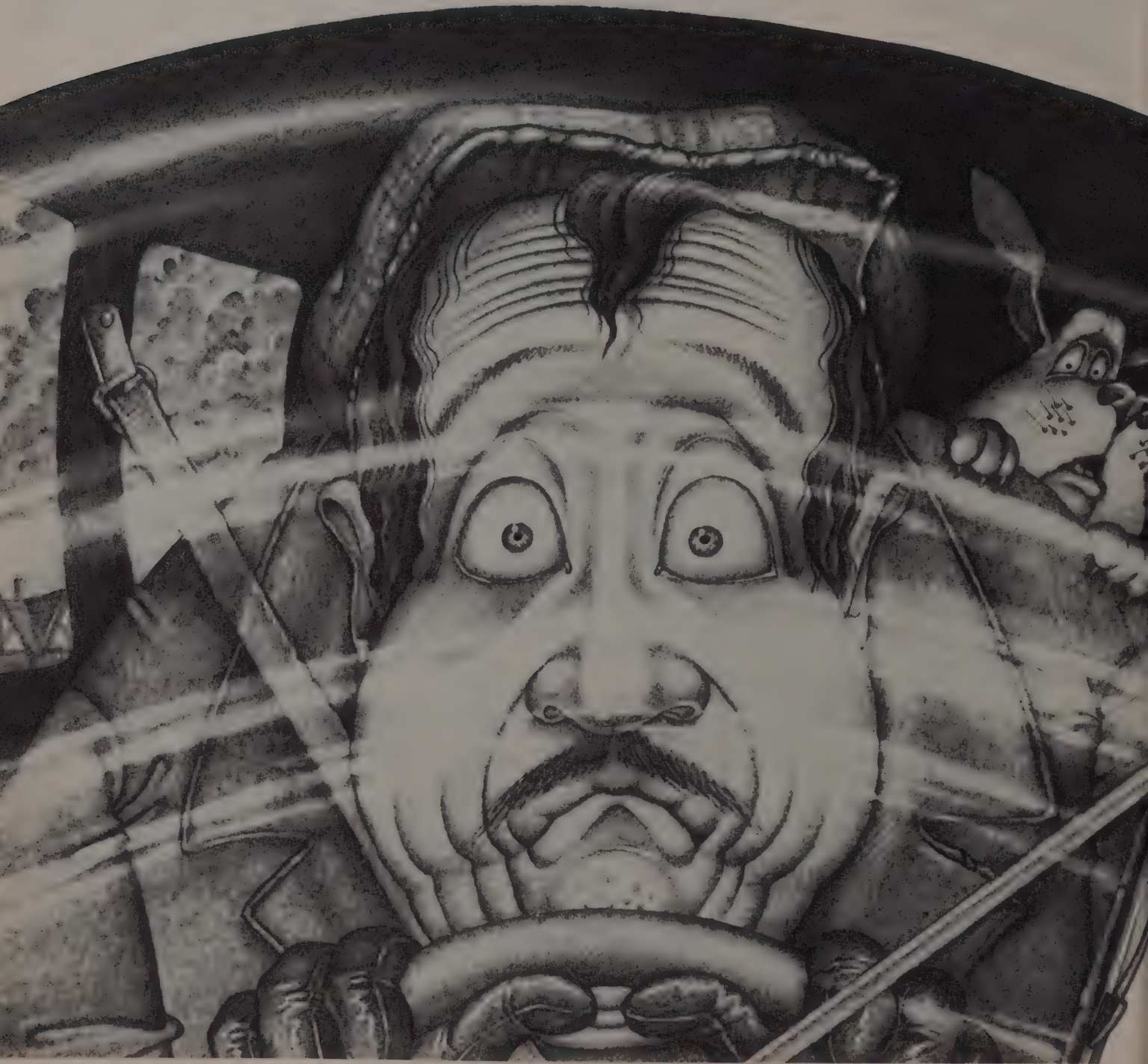
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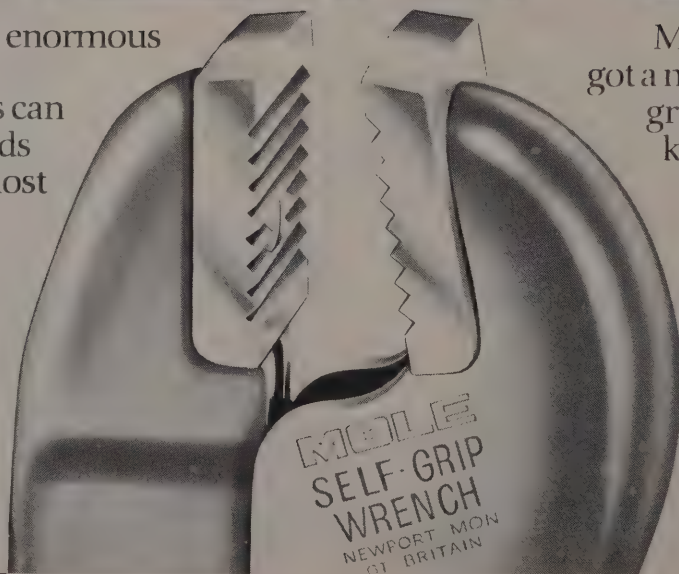
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sources, and the validity of the evidence supplied may indeed be questionable.

The AA believes that the motoring public has a right to expect that all such speed-trap devices should not be used for law enforcement unless they have been approved by, and operated in accordance with published procedures specified by, an independent watchdog agency.

Triumph at last?

About to be launched—at long last—are the Triumph TR7 convertible and a TR7 using the Rover 3500 V8 engine—the cars that, many say, BL should have made in the first place.

Prices of a gallon

Motorists on the receiving end of hefty price demands for petrol during the January tanker drivers' dispute may be surprised to hear that not a single complaint was received by the Motor Agents Association, the body that represents some 5000 of Britain's 29,000 filling stations.

'Clearly,' says the MAA, 'instances of people charging £5 for three gallons are examples of rank greed, and if any of our members indulged in this practice they would go before our disciplinary board and probably face expulsion from the Association.'

Desperate drivers who crawled along petrol queues only to dis-



Maiden names

DRIVE regulars will remember the aubergines that turned blue: a year ago, we told how Paris meter-maids were forsaking the dark-red uniforms that gave them their 'aubergine' nickname for a periwinkle-blue suit designed by haute couturier Carven. Now, our man on the Left Bank tells us, the inventive Gallic motorist has renamed his least-favourite ladies *les pevenches*—which means periwinkles.

Meanwhile, despite prolonged acquaintance, British drivers have no (printable) nickname for our sombre-suited wardens and wardresses. We look to DRIVE readers to fill the gap. Send us your suggestions: we promise to print the best . . . and not reveal your registration number.

cover that pump prices had risen between 2p and 10p may well remember that after the tanker drivers' go-slow of February 1978 the MAA said that it had figures to prove that none of its member-garages practised profiteering. But the Institute of Petroleum had figures, too, and it showed that, as a national average, prices increased from 73p to 76p when supplies were short, reverting back to 72p by April 1978.

'We don't think 3p unreasonable,' the MAA then soothed, 'not

when you consider that vegetables can increase 10–15p from one day to the next, dependent upon supply.'

It will be interesting to see if the overall increase of January this year proves as modest. The IOP is already pointing to increased demand, the Iranian situation, tanker-driver-and forecourt-staff wage increases, probable OPEC price rises, increases in rates and electricity, and saying: 'We are afraid that 80p for a gallon will have to be accepted as the rule.'

This, of course, doesn't allow for the 3p that Shell has before the Price Commission (as DRIVE goes to press), nor the 'at least another 3p' that the MAA says its members are seeking . . . nor the goodness-knows-how-much that the Chancellor needs for the abolition of the road-fund licence.

Bangers and trash

With the busiest time for used-car sales just round the corner, tread warily if you're in the market for a cheap runabout. For among those on offer from private addresses all over Britain will be models prepared by a growing number of people who don't know the first thing about car mechanics—encouraged into the second-hand-car game by an advert in *Exchange & Mart* that hints at rich, and easy, pickings.

Last year, 800 readers answered the ad and sent off £3 for an 18-page booklet produced by Chesterfield, Yorks-based used-car salesman Stuart Hancock. A publication that, in Mr Hancock's words, shows how, 'with very little cash or knowledge', anyone can buy an old banger at an auction, 'patch the bodywork up with a can of spray paint', give it a good valeting and sell it at a handsome profit.

Just how simple it's all made to sound can be gauged from the fact that the full description of what

The car in front and the car behind had a Krooklok

If you think as much of the wife and kids as you do of the car, remember a Krooklok looks after them all.

One look at Krooklok and the thief moves on to an easier steal. A Krooklok is both a visible deterrent and a physical barrier. It is very easy and fast to fit—any member of the family can do it!

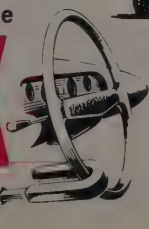
A Krooklok helps you to avoid all the messy inconvenience of being a no car family—get one soon.



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you need to do to the car prior to sale occupies just 1250 words, in large print, and deals only with improving appearances. The sole reference to mechanical condition takes up exactly *three lines*.

Although the author recommends at the outset that the novice dealer buys a car with 'a good MoT', it would be difficult in practice to find a vehicle in roadworthy condition and with MoT cover for around £20-£30—the minimum that Mr Hancock suggests will start you off.

'Anyone putting Mr Hancock's scheme into practice could be off-loading something that is unroadworthy, if not illegal, on to the public,' warns Les Sims, manager of AA technical services. And the trouble is that there's little chance of a buyer getting his money back if subsequently he discovers that the car is fit only for the scrapheap: the AA's legal department points out that recent consumer legislation is really only effective against traders: 'In this kind of operation,' it says, 'it would be hard to prove that the vendor is anything but a private seller.'

It's Stuart Hancock's proud boast that, five years after starting out with just £35, he now runs a car-sales business with a turnover of more than £175,000.

Tomorrow's spare

When the top brass of Firestone introduced the S-211 tyre, they were quick to point out that they had no immediate plans to market a rival to Dunlop's Denovo run-flat. Nor were they in a mood to speculate too far ahead about what the motor industry could demand of them in the future.

Rumour has it of the possible closure of one of the US firm's two British plants. But Jack Cornely, Firestone's president, suggested to *DRIVE* that a rationalisation of production may in fact involve the opening of a new UK plant. Much depends on progress in tyre technology . . . and a significant development is likely to be the fate—or future shape—of the spare wheel.

Firestone, in common with most tyre producers, has contenders for the lightweight spare. The problem, in Britain, is that both its designs are cross-ply and would therefore be illegal, even in an emergency.

Despite the well-known dangers of mixing radial-ply and cross-ply tyres, the company is nonetheless confident that talks with the Department of Transport will lead to legal changes that will allow specially designed lightweight, bias-ply spares to be used.

Meanwhile, Firestone expects great things of its new steel-belted S-211. With straighter sidewalls, it is claimed to offer quicker steering response and better lateral stability.



Pictures courtesy ADAC Motorwelt



It doesn't pay to argue with a tank

Army tanks on manoeuvre are not an everyday sight on British roads. But every autumn, once the harvest is in, the W German army maintains its right—granted by Frederick the Great—to carry out exercises across the country; and in recent years the 'home team' has been supplemented by the tanks, armoured personnel-carriers and heavy guns of the other NATO forces. Accordingly, the German road organisations lose no time in warning drivers to waive their rights as motorists: it definitely does not pay to argue with a 29ton Marder.

With 6000 tanks clattering along main roads, motorways, forest tracks and country lanes, southern Germany was no safe place to be last autumn: in more than 200 accidents, military vehicles were almost always responsible.

Tanks, obviously, pose particular

traffic problems: they take up more than half the road width; their crews cannot hear warning horns because they wear headsets; their drivers have good visibility only to the front; and, at night, often only tiny, camouflaged lights are displayed. Nevertheless, the locals tend to treat military manoeuvres as suitable occasions for family sightseeing picnics on the verges of forest and rural roads, despite advice to watch on television in the safety of home.

Collisions involving tanks and civilian vehicles are mercifully rare in the UK, but perhaps not as rare as the Ministry of Defence may care to make out: 'We have no record of any such incidents, and, even if we did, we couldn't give you any details,' it tells DRIVE. Such information, of course, is classified.

However, news of one such accident—and a very nasty one, too—did slip through the Official Secrets net when the ministry had to launch

an investigation, in April 1977, to discover how a 52ton Chieftain ploughed into a parked car outside Lulworth army camp, Dorset, injuring an elderly couple inside. It took firemen 30 minutes to cut them out of the wreckage, and only an overnight fight by surgeons saved the husband's life.

The ministry explained: 'The tank should have made a right turn . . . but instead it drove straight on.'

Not OK, OK?

In the US—where else?—the Federal Trade Commission is looking at a regulation that would force secondhand-car dealers to disclose all defects on the vehicles they offer for sale. It would take the form of a window sticker and list the major mechanical areas, such as engine, transmission, brakes, steering etc. Against each, the vendor would have to indicate OK or Not OK, and where an area was defective, there would

have also to be a realistic quote for the cost of repair.

Predictably, America's 60,000 used-car dealers are not exactly in love with the idea: the National Automobile Dealers Association is leading a campaign against it, saying that such a regulation will do nothing but force up the price of secondhand cars . . . and a lot of its members out of business.

Bulls in China's shops

Western vehicle makers are waking up to the fact that China represents the last great market they can sell into . . . if they play their diplomatic cards right. The Chinese are looking for deals that will let them get into production quickly with Western designs, some of which can be made in existing (if outdated) Chinese car and truck plants. Peugeot-Citroen—the world motor industry's current shooting star—and General Motors have both been in exploratory talks.

Roads information

Numbers in parentheses refer to maps in the 1978-1979 edition of the AA *Members' Handbook*.

BRITAIN

Motorways open M18 Junctions 2-4, 7 miles (34); M180 Scunthorpe bypass (and M181), 9 miles (35).

Major roads open A96 Huntly bypass, 3 miles (57); A64 Malton bypass, 5 miles (34); A45 Cambridge bypass, 9 miles (19); A629 Elland bypass, 2.5 miles (36); A9 Dalmagarry (near Moy)-Bogbain (near Daviot), 9 miles (56); A10 Milton bypass, 3 miles (19).

OVERSEAS

Austria Gleinalm Tunnel (8.3km long) runs between St Michael and Friesach, near Graz. Tunnel and approach roads (total length 32km) form part of the A9 Pyhrn Autobahn to run from Linz to Yugoslavia, and already reduce the road distance from Salzburg to Graz by 30km. Toll: 90 schillings, single, per car.

Belgium Motorway A5, south of Brussels—7.5km section between Haut-Ittre (junction with motorway E10) and Waterloo now open.

France St-Nazaire—toll for Loire Estuary bridge now 28f per car, single. Autoroute B71 motorway extended by 29km from Thiers W to Clermont-Ferrand. Toll, Clermont-Ferrand to Chabreloche (east of Thiers), is 9f per car.

W Germany Autobahn A3—final 21km of the Deggendorf-Passau motorway between Iggenbach and Passau W open.

Autobahn A29—Oldenburg eastern bypass (12.6km) open.

Autobahn A30, Osnabrück-Rheine, extended by 11km westwards from Ibbenbüren to Hörstel.

Autobahn A92, Ganacker-Deggendorf, extended by 11km from Plattling towards Deggendorf. Near Deggendorf, there is a direct link with motorway A3 for Passau.

Portugal Motorway E4—20km-long section between Fogueteiro and Palmela (near Setúbal) open. Toll 30 escudos per car.

Yugoslavia New road-numbering system at present affects only Slovenia and Macedonia: in other republics, old numbers likely to remain during 1979.



INDEX

The run for your money

IT NOW COSTS 6.14p per mile to run the average British car, according to the latest DRIVE Index of Motoring Costs for the 12 months to October 1978. That's a rise of 0.70p—seemingly insignificant, but another £7 or so a year to the average owner. Nevertheless, while not as economical as the French—the cheapest to run at 6.02p per mile—UK cars are only 0.01p costlier than the Japanese, and much more economical than W German and Italian models (6.28p and 6.30p, respectively).

For the cheapest car of all, however, you have to look to the 5.03p-per-mile Datsun Cherry/Sunny range, which has again overtaken the Ford Escort 1300—last Index league leader at 4.99p per mile, now 5.17p. BL's Austin Allegro is again third at 5.35p.








BL's Princess 1800/2200 continues to have the highest servicing and repair costs at £27.52 per month, followed by Vauxhall's Victor 1800/2300 at £25.51 and the BL Morris Marina 1800 at £21.52.

However, our latest Index shows that, overall, it now costs *less* per mile to run a car—a drop of 0.21p over the year, to an average of 6.40p per mile, that can be attributed to cuts in petrol, oil and accessory expenditure. On the other hand, motorists are on average covering 29 more miles per month (766), raising their average total expenditure to £588.35 per year: a fact reflected in the Index total (the figure at the top righthand corner of the table), which is two points up on the same period last year.

Motorists spent, on average, £15.17 a year less on petrol between November 1977 and October 1978 than they did in the 12 months up to October 1977; oil costs plunged by £2.26p; and accessories by £2.41.

In fact, expenditure on oil has tumbled since February 1978, when it was 128 points—28% above the October 1973 figure when the Index was launched. It was 127 points in April 1978; 113 in June; 110 in August; and, astonishingly, it is now down to just *one point* above the October 1973 mean.

COST OF MOTORING: November 1977–October 1978

INDEX Oct 1973 = 100	105	184	202	101	199	96	172	204	193
MONTH-BY-MONTH ANALYSES (all cars) AND ENGINE RATING ANALYSES (post-1968 cars)			Petrol 	Oil 	Servicing repairs 	Access ories 	Insurance 	Other costs 	TOTAL 
November 1977	778	6.04	24.26	1.13	9.04	0.32	4.06	8.17	46.98
December 1977	719	5.72	22.60	0.65	6.64	0.18	4.11	6.92	41.11
January 1978	616	7.17	21.07	0.64	11.23	0.61	3.99	6.63	44.16
February 1978	738	6.17	21.26	0.85	11.80	0.81	4.24	6.59	45.55
March 1978	674	6.69	21.47	0.70	11.33	0.76	4.22	6.59	45.08
April 1978	757	6.47	23.85	0.93	10.86	0.40	4.17	8.78	48.99
May 1978	762	7.82	24.86	0.63	21.56	1.18	4.33	7.05	59.62
June 1978	852	5.84	24.38	0.81	11.88	1.01	4.41	7.28	49.77
July 1978	813	6.55	24.92	0.89	14.19	0.31	4.41	8.50	53.22
August 1978	872	5.91	25.64	0.78	10.42	1.03	4.51	9.13	51.52
September 1978	798	6.56	23.27	0.84	15.08	0.65	4.45	8.02	52.31
October 1978	807	6.20	24.49	0.64	12.77	0.70	4.58	6.88	50.05
TOTAL (for year)	766	6.40	282.07	9.49	146.80	7.96	51.48	90.54	588.35
—900cc	578	5.35	13.82	0.57	5.90	0.97	4.01	5.66	30.92
901–1100cc	691	6.11	19.22	0.50	10.62	0.50	4.19	7.19	42.22
1101–1300cc	804	5.86	22.23	0.85	11.41	0.61	4.35	7.64	47.08
1301–1500cc	738	6.90	23.35	0.62	13.16	0.55	4.54	8.67	50.88
1501–1700cc	1012	6.08	31.49	0.58	15.91	1.05	4.89	7.61	61.52
1701cc +	975	6.35	32.98	0.78	13.99	0.64	5.53	8.00	61.93
MODEL-BY-MODEL ANALYSES—post-1968 cars									
Chrysler Imp	462	5.74	14.32	1.23	1.91	0.00	3.63	5.43	26.52
Avenger	691	7.80	24.17	0.97	17.50	0.70	4.11	6.44	53.90
Hunter 1500/1750	690	7.26	22.77	0.64	7.20	2.00	4.39	13.15	50.15
Datsun Cherry/Sunny	841	5.03	20.53	0.54	10.34	0.00	4.90	6.02	42.34
Fiat 128/124	823	5.80	20.09	0.29	15.11	0.00	4.81	7.44	47.75
500/127	428	8.22	11.03	0.23	12.88	0.00	4.42	6.66	35.22
Ford Escort 1100/Popular	873	5.73	25.78	0.49	9.67	0.65	4.13	9.30	50.02
Escort 1300	1004	5.17	25.71	0.58	12.44	0.93	4.44	7.86	51.96
Cortina 1300	882	5.67	27.86	0.06	9.63	0.00	4.25	8.19	50.00
Cortina 1600	1119	5.97	33.56	0.59	18.87	1.51	4.50	7.74	66.77
Cortina 2000	970	6.17	34.43	0.70	11.44	0.45	5.33	7.57	59.91
Capri 1600	814	6.64	30.98	0.57	7.24	0.22	5.37	9.68	54.05
Granada/Consul	1173	6.79	48.65	1.46	15.86	0.00	5.69	7.97	79.63
Leyland Mini	573	6.17	15.30	0.57	8.77	0.29	4.21	6.21	35.35
1100/1300	540	6.97	16.98	0.66	6.85	2.71	3.70	6.71	37.61
Allegro	786	5.35	22.91	2.60	4.92	0.82	4.28	6.54	42.06
Maxi 1500/1750	789	6.31	24.39	0.65	13.68	0.00	4.35	6.75	49.82
Marina 1300	865	5.82	22.21	0.52	14.01	0.68	4.05	8.93	50.39
Marina 1800	1008	6.69	29.22	0.54	21.52	0.55	4.72	10.89	67.44
Princess 1800/2200	644	9.80	23.88	1.29	27.52	0.00	4.38	6.03	63.11
Rover 2000/3500	985	6.35	34.66	0.58	12.38	0.34	5.54	9.04	62.54
Triumph Toledo/Dolomite	794	6.00	22.03	0.50	12.95	0.21	4.79	7.15	47.63
2000/PI	864	6.48	32.30	0.58	8.69	1.38	5.66	7.39	56.01
Simca 1000/1100	700	7.00	21.52	0.29	16.28	0.26	4.19	6.42	48.96
Vauxhall Viva	776	5.60	21.52	0.72	9.59	0.50	4.08	7.05	43.46
Victor 1800/2300	682	10.09	31.33	1.20	25.51	0.00	4.36	6.43	68.82
VW Beetle	593	7.26	18.29	0.78	13.00	0.01	3.96	6.97	43.01
All Chrysler UK	702	7.17	23.25	0.88	12.10	1.35	4.28	8.54	50.40
Ford	988	5.88	31.33	0.59	12.55	0.72	4.68	8.27	58.09
Leyland	769	6.38	23.44	0.81	12.37	0.58	4.55	7.32	49.06
Vauxhall	840	5.85	24.80	0.78	11.71	0.34	4.31	7.18	49.12
All British	844	6.14	25.98	0.74	12.20	0.67	4.54	7.67	51.81
All Fiat	717	6.20	18.32	0.44	12.59	0.38	4.93	7.80	44.46
Renault	840	5.69	22.26	0.39	11.54	1.54	4.76	7.33	47.83
Simca	704	7.66	22.37	0.25	20.17	0.19	4.45	6.50	53.93
Volvo	1013	5.87	36.00	0.82	8.09	0.94	6.14	7.52	59.50
All French	837	6.02	23.63	0.41	12.37	0.89	4.84	8.26	50.40
Italian	713	6.30	19.47	0.44	11.42	0.33	5.34	7.92	44.91
Japanese	885	6.13	24.01	0.79	16.71	0.19	5.37	7.15	54.21
W German	865	6.28	26.60	0.60	13.42	1.32	5.20	7.16	54.31
All Foreign	824	6.19	23.95	0.59	13.04	0.70	5.14	7.57	50.98

Average monthly costs (£) excluding depreciation

Cost per mile (pence)

Average monthly mileage

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The trouble with rust is that it does most of its damage out of sight. And by the time it's visible the rot's well and truly set in.

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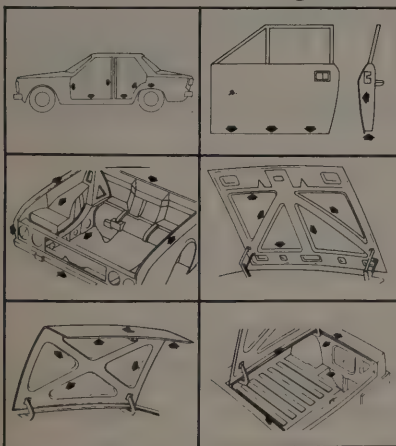
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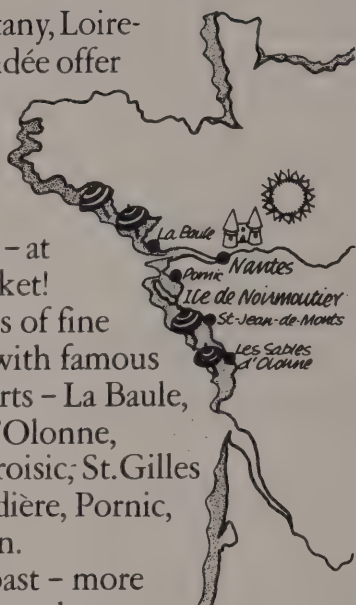
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“When Protectol came along and asked me to help them sell their rustproofing, I started thinking of the nicest way to say ‘No’. But they were very enthusiastic about bringing more motorists the benefits of their system, and really wanted to get the message across. Naturally I became curious. So I asked them what it had going for it.

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Okay, I thought, that’s fine for Protectol. But what about the customers and their cars?

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So they weren’t just another rustproofing system, I suggested.

‘You bet we’re not. In fact Protectol pioneered modern clean vehicle rustproofing in Britain.’

So I asked them why I hadn’t heard more about them before?

‘Because we didn’t have Stirling Moss to sell Protectol.’

That did it. From now on I’ll be telling you a lot more about Protectol and Gold Seal Rustproofing.



Because if it wasn’t good - you wouldn’t catch me saying it was!”

Stirling Moss
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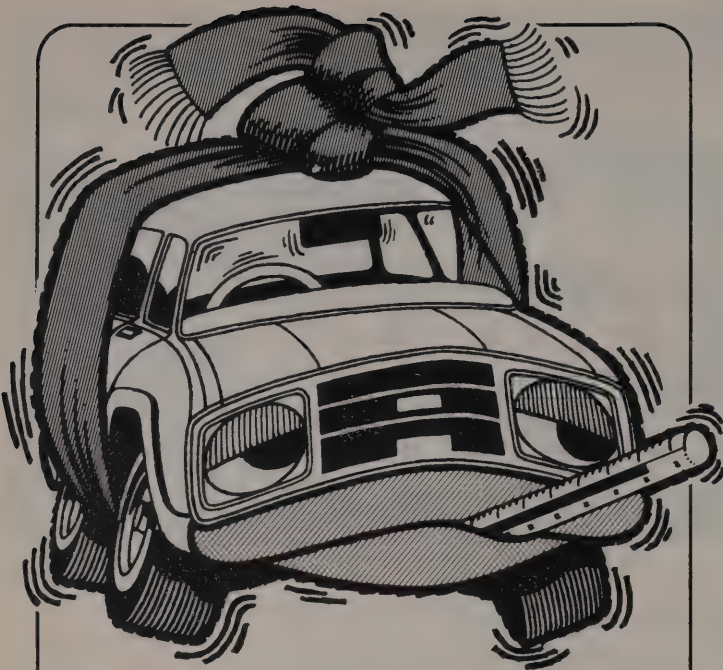
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Cars can catch cold too, in Winter. Frosted windscreens, condensation, chilly steering wheel and seats.

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A genuine Waxstat thermostat, fitted to your engine, gives your car a rapid warm-up. Heaters work sooner and blow hotter air; driving quickly becomes comfortable. And, because visibility clears earlier, motoring safety can be improved.

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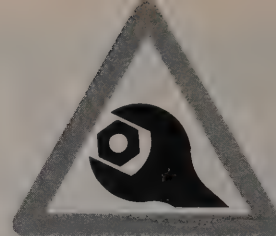
Fitting a new Waxstat thermostat is easy, usually being accomplished in about 20 minutes without special tools. The Waxstat range is available from your garage or accessory shop. Treat yourself (and your car) to one today!

Warm up quickly this Winter with a genuine WAXSTAT®

Waxstat is the name of the engine thermostat used as original equipment on over 90% of British cars.

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MECHANIC

Simple dwelling

THE VAST majority of car break-downs are caused by electrical faults, many of them due to neglected contact-breaker points. In view of the fact that, in the average four-cylinder car travelling at 70mph, the points are opening and closing 10,000 times a minute, and in a 6000-mile period they open and close about 60million times, it's surely only fair to give them a decent break!

Many people still set their contact-breaker points with a feeler gauge, then slip the rotor-arm on and snap the distributor cap back into place with a feeling of smug self-satisfaction. But some home mechanics' ideas of what a 15, 20 or 25thou gap really is can be very odd.

The trouble with relying on this method alone is that, if the points have not been renewed, the 'pip' and 'crater' that inevitably appear on the respective contacts make a nonsense of the setting. And, when new points are fitted, no account can be taken of wear in the distributor shaft and its bearings, which can also give a false reading and compound any errors introduced by the gapping.

The result is incorrect timing of the spark, causing poor ignition performance at high engine speeds, increased points wear and even coil overload—and that's only on the electrical side. More trouble can result elsewhere.

If, for example, the points gap is too small, the so-called 'dwell angle' is increased—the period of distributor-shaft rotation, measured in degrees, during which the car's contact-breaker points remain closed.

There is a degree-for-degree relationship between the dwell angle and ignition timing; if the points dwell is, say, one degree out, the ignition timing will also be one degree out. A one-degree increase in dwell means that the points close half a degree sooner and open half a degree later than they should. Thus, the spark will be one degree retarded—and retarded ignition means overheating, poor performance and wasted fuel. Conversely, if the ignition is too far advanced, it will cause damaging 'pinking'—the metallic knock of premature ignition.

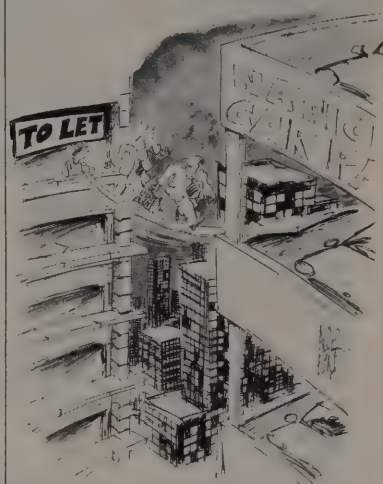
By far the best method of setting

the points is to use a dwell meter, such as our Special Offer Gunson's Sparktune 2, that measures electronically the dwell angle by taking an average reading of the points gap per rotation of the distributor cam, thereby taking into account any discrepancies caused by wear.

It takes only a few seconds to set up, and gives spot-on points settings. Simply connect two wires—one to the coil, the other to the distributor—turn the engine over on the starter and read off the scale. After that, it is just a matter of adjusting the points until the correct dwell angle for the distributor is achieved.

An important feature of Sparktune 2 is that, because readings are taken at cranking speed, the dwell angle can be re-checked—should adjustments be necessary—without the need to refit the rotor-arm and distributor cap in order to start the engine. Because dwell angles vary considerably from model to model according to each car's distributor, Gunson provides information for more than 2000 vehicles from 1965 onwards.

But Sparktune 2 is not merely a dwell meter: without changing



'You appreciate, sir, that city-centre office accommodation with adjacent parking space is quite a rarity these days'

connections, the meter will also indicate the precise instant at which the points open, and so aid accurate static-ignition timing. There is also a points-condition scale that measures the points' resistance while maximum current is flowing, so diagnosing dirty or excessively-burnt contact points.

To add even further to the instrument's versatility, there is a volts scale. This is used to check the correct operation of most cars' electrics, and can diagnose the cause of a malfunction in ignition, charging and starter circuits as well as in other accessories such as indicators, lights and wipers.

BARRY FRANCIS

DRIVE SPECIAL OFFER

Get in tune!

David Cripps

YOU DON'T NEED to be an under-the-bonnet fanatic to get the best out of your car . . . nor do you have to put up with sluggish performance until a garage can put your engine right, simply because you think you can't adjust it accurately yourself. The ingenious Sparktune 2 meter does virtually all the work for you.

Easy to operate, versatile and offered here for only £8.45—nearly a third below shop prices—this DRIVE Special Offer can give you petrol savings of up to 7% (that's £20 a year to the average motorist), take account of engine wear and ensure tip-top running performance at a turn of a screwdriver. Handily packed, with full instructions, it's an essential motoring 'stethoscope', guaranteed to monitor accurately your engine's health.

Read this issue's Mechanic (opposite) for a simple explanation of how Sparktune works . . . then do yourself a springtime favour and fill out the coupon below and send it to us with a cheque or PO made payable to the AA. The offer is available only to readers in Gt Britain and N Ireland and closes 31 July.

DRIVE Sparktune 2 Offer

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HEALTH

Three-year rule, OK

ALMOST HALF A century ago, there was a horrific crash outside Buckingham Palace that was to put all drivers suffering from epilepsy off the road for the next 40 years.

What happened was that a car suddenly veered off the road into a bus queue, killing four people. In the car was a bottle of bromide—in those days the standard treatment for epilepsy—and it was assumed that the driver, who could offer no explanation for the crash, was suffering from this condition.

In the wake of this 1930 tragedy, all London was up in arms and ready, it seemed, to join in the witch-hunt against epileptics that has been waged in some form or another throughout history. 'Once

an epileptic, always an epileptic,' said the British Medical Association. Anyone who had ever had a fit of any kind was banned from taking the wheel.

In fact, many people got round the problem simply by concealing their condition. One estimate, shortly before the ban was lifted eight years ago, was that almost half of all adult epileptics were driving illegally.

Clearly, some epileptics posed a real threat to road safety: fits do sometimes come on without warning, and—before the situation was rationalised in 1970—there was the occasional spectacular crash in which epilepsy was said to be the cause. It was for this reason that the law was changed: to allow those epileptics whose condition was well controlled to drive legitimately, and to offer hope to the rest that they might one day qualify for a licence.

The ruling of 1970 allows anyone who has been free of daytime (waking) attacks for at least three years to drive a private car. Obviously, people with a history of fits are still barred from driving heavy-goods or public service vehicles.

Today, it is estimated that there are 300,000 epileptics in the UK, one-third of them children. But what they are suffering from is not

a single disease as such. Characterised by abnormal electrical discharges in the brain, epilepsy is a condition that can arise from injury at birth, from certain feverish illnesses, from a head injury—or indeed from no known cause.

The attacks vary in type and duration. Only about half are major fits—the classic *grand mal* seizures involving loss of consciousness and convulsions. Minor fits take the form of what are known as psychomotor attacks, where the patient appears conscious but may be unable to respond. There are also almost imperceptible *petit mal* attacks, in which the patient simply goes blank for a few seconds.

In all but a tiny minority of cases, the fits can be well controlled by anti-convulsant drugs. In fact, thanks to these drugs, 80% of epileptics experience attacks only rarely or not at all. The trouble is that fits may recur at any time—even after an interval of years—and, when motoring, minor fits can be just as disabling as major ones. Furthermore, there is no guarantee that a person with a history of minor fits only will never have a major attack.

The fact that epilepsy sufferers can hold a driving licence at all is a tribute to the success of anti-convulsant drugs. So the para-

mount rule for the epileptic driver is not to forget or skip a dose (and never suddenly to give up the drug altogether).

There are other commonsense precautions, too. For example, doctors warn that epileptics should not overdo it by taking jobs involving a lot of driving or by spending long hours at the wheel, particularly without adequate food and rest. Most important of all, epileptics should never drink and drive, and they should always seek medical advice before mixing anti-convulsant and other drugs.

As a more general safeguard, the British Epilepsy Association recommends some form of identification—either one of its special cards or a Medic-Alert disc—to spell out the situation in an emergency. 'If you do have a fit,' says the BEA, 'it's obviously best to let people know that you're not drunk, drugged or dying.'

Meanwhile, for the epileptic motorist, the legal liability is clear; any change in the condition itself or its treatment should be notified to the authorities. If fits recur, it may mean going back to the starting line.

The three-year rule is a tough one, but not nearly so harsh as the 1930 ban. It is, moreover, much safer for everyone concerned.

CAR TESTS

None of them really have enough steam for relaxed everyday inter-city work, but 1000–1250cc should be just the ticket for the round-town and station runs. **DRIVE** lines up VW's Derby LS, Vauxhall's Chevette GL and Toyota's Starlet... and looks at more than just the timetables

VW Derby LS

Price £3155 On the road £3275



VOLKSWAGEN GETS THE ORDER OF THE BOOT

For stolid Volkswagen, the introduction of the Polo, Passat, Golf and Scirocco was as significant as the Industrial Revolution. Unsurprisingly, the new range soon began to attract the 'new thinkers' of the switched-on motoring world; but, sad to report, the company's 'loyal and ancient' customers found the cars all a bit too... well, modern. With many a backwards glance, these reactionaries started buying Ford Escorts and Opel Kadetts.

It was a rot that had to be stopped, and one of VW's answers was to graft a boot on to the Polo and—for no good reason—call it the Derby. Now the Derby always was a gamble, but, by offering the best of both worlds, Volkswagen successfully hedged its bets. **DRIVE** put its money on the LS version, and laughed happily all the way to the finishing post.

How it goes

The little 1093cc engine, pushing out a healthy 50bhp via the front wheels, is, **DRIVE** reckons, the nicest of the Derby's many nice features. Happy to potter lazily or spin like a top, it will appeal to gentle drivers and boy-racers alike. Unlike the engine of the Chevette and the Starlet, it doesn't complain at being thrashed, so VW's belief that you need gear change-marks on the speedometer is well founded.

After driving the Derby, it's surprising to find that, in stopwatch terms, its acceleration is only class-average, and that it could be eaten alive by some of the sportier hatchbacks. But no 1100cc rival delivers the goods like the oh-so-refined Derby: a top-gear spurt from 30–50mph takes a purring 10.9sec, and the test-track maximum speed is a growling 87mph.

This new generation of VWs suf-

fers none of the whines, lurching in low gears, clutch snatch or any of the other front-wheel-drive gremlins of old. Gone, too, are the days of dreadful front-drive gearboxes—the Derby's is light and fairly precise.

Despite being $\frac{1}{2}$ cwt heavier than its Polo sister, overall mpg figures for the two cars are no more than a spit apart. Our Derby managed 38mpg over 1000 test miles—an effective range of 260 miles between fill-ups—but there are savings to be made over short runs, thanks not to any difference in body size or shape but to a choke with a warning light built into its knob.

Like the Polo, the Derby does it all on 2-star petrol, which we reckon is worth an additional $1\frac{1}{4}$ mpg against a 4-star thirst, such as that of the Chevette. Built for Germany's *autobahnen*—it isn't a motorway guzzler, and downs a gallon every $33\frac{1}{2}$ mpg at 70mph.

Good handling is something that **DRIVE** testers have come to take for granted from VW, but the Derby is perhaps the best to date. Wet or dry, it darts round hairpins with notable stability. Pushed too hard—and it has to be very hard—the nose just runs gently wider, and is easily caught. On a dry test track, the car remained well behaved, even while its inside rear wheel climbed 6in into the air!

The Derby has ultra-modern self-stabilising steering to keep it on course on a patch of ice or oil—and it works. But if front-wheel adhesion ever should go, the driver gets virtually no hint of it from the steering... which is rather disconcerting if you are unwilling to let a car do your thinking for you.

Ride comfort is surely the least impressive feature of the car—although we admit freely that we are being hyper-critical: drivers of UK or Japanese live-axle saloons would be pleased with a ride in the Derby, but VW Golf owners, for example, know better.

It took a slightly heavy 80lb shove on the brake pedal to reach **DRIVE**'s best stop of 95%, but our graph shows that there is even progression along the way. Stopping becomes easier as the brakes warm to their work, and they don't much mind a soaking. What charts and figures can't reveal, however, is the way the pedal *feels*: its long travel is distinctly unnerving, and its sponginess

makes you think the system needs bleeding—both VW traits.

Inside story

An extra section neatly grafted into its floorpan makes the Derby 14in longer than the hatchback Polo. The additional length is given over completely to luggage, and the tape-measure proves that the Derby has one of the biggest small-car boots in the business. Practical types will appreciate, too, the way in which it is covered by an easy-to-clean plastic mat... though puncture sufferers will curse as they remove the boot contents to get at the spare wheel.

Surprisingly, the extra luggage space has not come entirely from the length bonus: rear-seat passengers are distinctly short of legroom, even though the seat has been angled to make the best use of available space. Front-seat passengers, however, are given the

VIP treatment, and can happily cover long distances despite an initial feeling that the seats are over-firm.

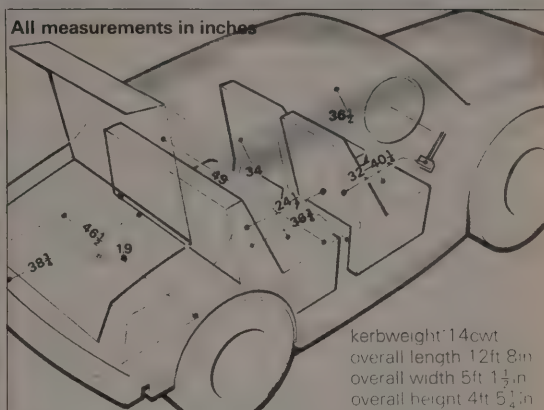
An accurate speedo and fuel gauge are neatly set behind a single, reflection-free glass, and, with Volkswagen relying heavily on warning lights (one has even been used to replace the water temperature gauge), there is little to pull the driver's eyes from the road. The other side of that argument, though, is that, while gauges can usefully warn of trouble looming, a telltale light can come on too late to save trouble or mid-journey anguish...

Four stalks on the steering column look confusing, but the two that fall easiest to hand—indicators and wipers—are those needed regularly. Features we *don't* like are a heated rear-screen telltale that's hidden from view; barely adequate headlamp main beams; and wipers not converted



Smokers are given no encouragement: with no cigarette lighter they have to grope in their pockets for a light; and front-seat passengers just may flick ash down a ventilator before they can be stopped. Oddments space—shelves, back and front—is marred by the lack of a lockable glovebox.

The crude-looking ventilation system, with lids that open to project threateningly from the fascia top, doesn't seem at all at home in a high-quality albeit



On the safety front, the opened ventilators could well present a crash hazard; but, otherwise, padding has been added with

thought. Nasties such as the column stalks are designed to break off if struck by a flailing limb; rear-seat passengers don't need help to escape from the back—front seat releases and door catches are all reachable from behind; and door releases and fuel filler cap are protected from a side

swipe. Pennies have been saved, however, by making head restraints and a laminated screen into extra-cost options.

Commuter belters

DRIVE's Derby was well protected from rust, but Volkswagen did an even better job on its cars two



years ago; less care is taken to protect sills and bumper valances these days.

Paintwork was a street ahead of the group rivals, and construction standards on the Derby remind you of the airtight-Beetle boast that doors were reluctant to close unless one of the windows were opened.

For the DIY man, the complexities of front-wheel drive, Volkswagen-style, hold no terrors, but, with a hopeless handbook, DIY-owners are not encouraged to have a go. Instead, the persuasion

is to take your Derby to a dealer for a diagnostic check-up—a feature that cuts garage times so saves cost.

Dog owners won't love the crushed velour type of upholstery when it comes to removing Rover's hairs, and—as in 99% of modern cars—the carpets can't be removed for a thorough cleaning; neither they nor the rest of the Derby's trim look hard-wearing or plush enough. Mudflaps would stop filth spreading rapidly up the Derby's flanks, and there is rather too much

water-harboring trim. Capless wheels are difficult to clean, too.

Derbys have not been around long enough for us to be sure of their appeal on the secondhand scene, but, surprisingly, the Polo depreciates more than some rivals. Insurance is two steps above the Chevette—Group 4.

Verdict

DRIVE has always thought highly of the Polo (at one time there were three owners on the staff), and in everything but space the Derby is identical. 'Putting the boot in' has

been a shrewd move, and, in Germany at least, the Derby is proving the better seller.

With four passengers on board, it can handle more luggage than any of the current crop of baby hatchbacks; but, of course, with only two up, it lacks Polo versatility.

The Derby's forte is mechanical refinement, proving that a driver doesn't have to make too many concessions to think small. Allied to impressive standards of construction, for which our ex-Polo owners can vouch, it is surely one of the best in its class.

Vauxhall Chevette GL 3-door

Price £3064 On the road £3193



IT LOOKS GOOD, IT FEELS GOOD, BUT ...

With its Cavaliers, Carltons and Royales, Vauxhall seems to be the only British manufacturer now turning out a stream of interesting new cars. But all of these additions to what was once a rather dull family are a result of the British company's association with its European GM sister, Opel.

The turn-round in Vauxhall's fortunes began in 1975 with the Chevette—the first British hatchback able to hold up its head among the best of Europe. On paper, it sounded like a Frankenstein monster, with its Opel floorpan, tried-and-trusted Viva mechanicals and all-new body. But—surprise, surprise—it worked.

Four years later, the motoring world has hatchbacks coming out of its ears, with some very good ones from which to choose. So does the Chevette still figure on our shortlist?

How it goes

Vauxhall's 1256cc power unit may be long in the tooth, and was unimpressive in the Viva, but in the shapelier Chevette it undergoes a transformation. Below 30mph around town, it still displays a characteristic roughness. But once rolling it's a different story, and drivers are encouraged to keep the revs high to extract some fun from the 58bhp lump ...

even if it is, however, out of date compared to overhead-cam rivals like the VW Polo's.

Test-track figures confirm that the Chevette would now struggle to keep pace with some 1300cc cars, but noise levels are so well suppressed that all the performance can be used without excessive wear on the occupants' ears. Our test car climbed eagerly to a top speed of 89mph, and felt as though it could keep this up all day, sipping fuel at 19½mpg. In acceleration terms, 60mph is available from a standing start in 16.2sec, and 30–50mph—for those too lazy to drop into third gear—takes 11.9sec.

The gearbox is as ancient as the

engine, but drivers are always surprised to find it so slick—if not as butter-smooth as a Ford Escort's. Happily, the box on our latest car was free from the 'Vauxhall whine' that we have come to expect. Clutch action could be smoother, and newcomers may find it too easy to cover themselves in traffic-queue embarrassment.

The last two Chevettes tested had a tendency to pre-ignition 'pinking' if their diets were anything less than 5-star fuel. Judging by the latest offering, it seems that Vauxhall has done more than count its worry-beads: it has lowered the compression without losing a fraction of a bhp, and our test car ran as sweet as a nut on 4-star to give a creditable overall figure of 37mpg. Keeping your speed legal is all that it needs to ensure that consumption never falls into the 20s.

Press-ahead drivers may well have too much fun to notice, but the low-speed ride can be ... well, restless (to put it mildly) on anything less smooth than a motorway. The crashing over potholes can be disconcerting, too—it's felt as well as heard. But put the Chevette on a fast main road and all complaining stops, such is the feeling of being 'welded' to the road, unruffled by crosswinds.

If a poor rough-road ride is the only price that Vauxhall asks for the Chevette's remarkable handling, then it's a deal that will find some takers. DRIVE testers voted it the best-handling car of this trio, and were convinced that it has no home-built rivals. It just

goes to show—yet again—that a well set-up rear-wheel-drive car has a lot going for it, even if it is considered 'unfashionable' in the small-car stakes.

Roadholding is outstanding, and a Chevette cornered hard will run gently wide: a driver would have to try very hard on a wet road before the tail started to slide.

Road 'feel' through the nicely weighted and padded steering wheel provoked a mixed reaction among our testers. Two voted it a delight, while a third felt that the real feel was transmitted more via the seat of his pants! All were agreed, however, that it beats the Derby and the Starlet, both of which are also well set-up.

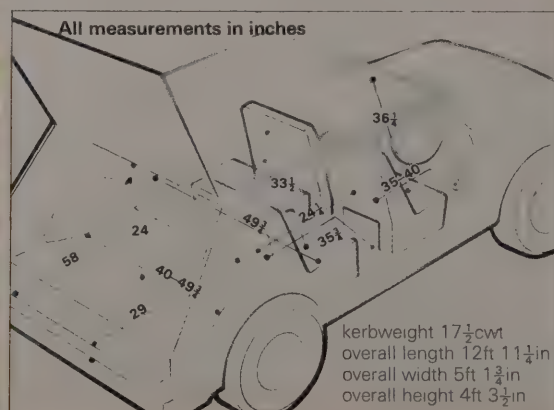
Vauxhall seems to have taken to heart past AA criticism of the Chevette's braking system: it once showed a tendency to fade when the going got tough, and didn't like a soaking, either. The latest offering has no such vices. Try as we may, though, we couldn't coax better than a 90% stop out of the system—a reflection that, while tyres may corner well, they may not necessarily excel in braking.

The handbrake proves strong enough for a 1-in-3 hill and is conveniently placed.

Inside story

Vauxhall goes in for some odd-looking interior colour schemes, that must put off a lot of buyers ... who'll never know what they missed. DRIVE's test Chevette GL had rather gaudy plaid seats, but the total effect wasn't too 'loud'.

It's down to luck, however, if the



seat adjustment suits you: fore-and-aft movements seems to leave large spaces between the notches, and reclining the seat is altogether too much like hard work, although it is infinitely variable.

The control layout, on the other hand, is smart and businesslike. Indicators are on the righthand stalk, British style—unlike those of Ford—and the lefthand stalk operates the electric washers and wipers. The Opel-inspired instrument pack was a nice step forward for Vauxhall, with all the dials easily visible behind one, non-reflecting piece of glass. The accurate clock is a standard feature on the GL version, and there is a neat bank of six warning lights, including one to tell of brake wear.

People who enjoy straight-arm driving need to lean forward to adjust the heater and to reach the awkwardly placed rocker switches. Some testers, too, remained unimpressed by the pedal layout—no space beside the clutch to rest your left foot—and it's quite a step up from the accelerator to the brake.

As a holdall for two, the Chevette is fine. As a four-seater, it leaves a lot to be desired. Entry into the rear seats is a struggle, and front-seat travellers have to give up some of their legroom to ease the situation.

The other complaint is lack of load height: while the unconverted luggage platform is wide and the roof is high, a box more than 1ft tall can scratch the heating elements on the tailgate window. It's hard to be practical and pretty. Part of the problem is that the fuel tank and axle hide under the luggage deck... and so does the spare wheel.

Fold the rear seat forward, and, as a two-seater with lots of room, the Chevette looks a much better proposition, revealing a flat, 5ft-long platform.

Heating and ventilation is of German origin, with the Chevette using the Opel Kadett's water-valve system. But, in addition to seating limitations, rear passengers will complain of cold feet.

Slatted, rectangular fascia vents offer reasonable control of flow and direction, but maximum airflow is a disappointment in hot weather. On cooler days, too, the driver's left hand can get more fresh air than his face.

The central vents also make no contribution towards demisting door windows on a wet day—an irritation that becomes more pronounced when you discover that the absence of windscreen drip-rails lets in the rain if you lower a door window an inch.

The Chevette's droop-snoot front is more than just a pretty, aerodynamic face: it's part of the car's crash-protection package. DRIVE

reckons, however, that Vauxhall could make a bigger safety effort with its baby.

The roof is ribbed and unpadded, and the ignition key and fusebox present driver hazards at knee level... though we did like such features as the well-reinforced door pillars, and well-protected fuel tank and filler cap. It all boils down to a need for more attention to detail.

Seatbelts were uncomfortable for tall testers, and they always seemed to get in the way of the seat adjusters. Poor design detail.

Living together

While its rust protection is well-intentioned, Vauxhall rates a 'could try harder' comment this time, especially if the test car's paintwork was typical. Underbody protection is good, with a hard-setting plastic protective compound applied on the production line, and cavities sprayed by lance-injectors after priming and painting. Long-term rust begins in the Chevette's roughly filled front-wing seams.

What brightwork there is looks to be of good quality, and our only other niggle is that the sills are only paint-protected. Vauxhall is doing something about this on up-market Cavaliers, so why not on Chevettes, too?

DIY owners have had to spend too much time under the bonnet in recent years, proving that mechanical orthodoxy does not necessarily mean reliability. Trivial things, such as drive-line noise, jerky clutches and electrical faults have proved bothersome.

Dog owners won't like the carpeted load space... but, if your luggage is smart, you'll bless it. Certainly, a vacuum cleaner is needed to do a proper job inside. Smooth lines make the outside easy to wash.

Secondhand prices show a healthy demand for used examples, and insurance companies give the model a Group 2 rating.

Verdict

Predict demand has led Vauxhall to expand the Chevette range from the original eye-catching hatchback to include a conventional 4-door saloon and a true estate. All handle superbly well, and have earned their market share through sheer driver-appeal.

In hatchback form, as tested, the Chevette is short of rear seat room and luggage space, too, unless the back seat is not needed. For some buyers, that will rule it out of the reckoning.

DRIVE's testers felt that they could live happily with a Chevette, though, and might even queue up for one if Vauxhall could provide it with a thoroughly modern, flexible engine, like the Derby's. That, they felt, was the crying need.

Toyota Starlet 3-door

Price £2858 On the road £2988



POLISHED PERFORMANCE—BUT NO OSCARS

For at least a decade, motoring writers have been saying that Japanese cars don't go as well as their European rivals... but buyers have gone after them in ever-increasing numbers. Witness the record of Toyota: from a meagre production of 700 cars a month in 1955, it built up to 50,000 cars a month by 1964 and, thanks largely to the Corolla, which in 1977 sold better than any other model, is now the world's third-largest car producer.

You wouldn't think so, of course, judging by the comparatively few Toyotas to be seen on British roads. Though things might have been different if import restrictions hadn't been decreed just when Toyota was ready to flex its muscles here, and things certainly should be different now that it has hitched its hopes to the Starlet.

A typical small hatchback, with only a 993cc power unit on offer, it's not an obvious competitor to the 1100cc Volkswagen Derby or Vauxhall's 1256cc Chevette. Yet its price and engineering make them inevitable rivals.

How it goes

The Japanese mass-production car manufacturers UK makers know and fear have generally shunned technical innovation and sophistication to build their fortunes on engineering quality, keen pricing and availability, brash good looks and reliability. But the Starlet emerges with rack-and-pinion steering and a hatchback body that puts the emphasis on function rather than style—the kind of thing featured on the Vauxhall Viva 10 years ago, but heady stuff to a Toyota fan.

Not that the push-rod power unit—a souvenir of the late and unlamented 1000 saloon—will make his pulse race. Its 47bhp output is respectable in the 1litre class, but, presumably in a search for cruising-speed refinement and

economy, Toyota has harnessed it to high overall gearing, which means that low-speed pull-away is inferior to similar-engined rivals; to keep up, the gearbox and accelerator must be used liberally.

It's very much 1000cc performance at a 1100–1200cc price, but the Starlet does offer some clear advantages. It is a smooth and discreet cruiser at any speed between 30mph and 70mph. It doesn't complain, either, at having to pull from 20mph in top gear, and, apart from some gear whine and a prominent 'edge' to its engine note at around 55mph, it's very easy on the nerves. Full-choke starting is faultless, and the car has the smooth tickover characteristic of the idling Nippon.

Like all the Starlet's major controls, the gear change is flattering to use—Toyota has a knack of making you a smoother driver—and should make the model a favourite with driving schools...

The higher-g geared, slower-turning engine does have a beneficial effect on motorway fuel consumption, but, in general use, results are no more than respectable. We suspect that a suitably-g geared, 1166cc Starlet (engine courtesy of the Corolla) could be a better all-round proposition, but Toyota offers no choice.

Filling the tank to the brim is easy and, although there's no low-level warning lamp, with experience of the gauge's pessimism, it's possible to squeeze in 7½gal at the pump to produce a touring range nearing 300 miles.

With a well-located, coil-sprung rear axle, the Starlet's suspension has much in common with that of the Chevette—at least, on paper. The results beg to differ...

Not for Toyota the vibrant handling and sensitive steering that is enjoyed at the cost of a punishing ride; the Starlet feels competent but undistinguished—far less taut and sharp in corner-

ing, but more resilient and easy-going over rougher surfaces. Sheer roadholding, though, is extremely good, even in the wet. It does flounce over uneven roads, but it holds steady on windy days.

In general, the Starlet's handling is as difficult to fault as it is to enthuse over, although its light steering doesn't give as much road 'feel' as that of the Chevette; as with the Derby, the tyres can be losing their grip seriously without the driver knowing.

The brakes are a different story. So often, we find test cars' anchors to be easy and flattering in gentle, everyday use but hopeless in the panic situations that we simulate in our closed-circuit tests. Not so those of the Toyota. Apart from taking a little time to recover from a soaking, their performance is impeccable, and, with its grippy roadholding and forgiving cornering, the Starlet proves an excellent accident-avoider.

Inside story

The test car was a three-door, but Toyota offers an extra rear pair—something that few super-mini makers have thought worthwhile. At only £92 extra, it is a feature that family men shouldn't miss.

There's one key for all locks, and the tailgate has an additional remote-control latch on the floor by the driver's seat.

The driving position at first seems reasonably comfortable—front seats are generously proportioned—but longer acquaintance gives rise to complaints about inadequate lumbar and lateral support: they are rather shapeless and unimaginative.

The fascia is tidy and free of silly gimmicks, with a telltale for brake-system faults and a warning of improperly closed front doors. Sadly, however, it doesn't monitor the tailgate; and there are no telltales for low fuel and choke.

Drivers have a good all-round view; the wipers sweep intelligent arcs, even if the blades do smear rather than clear the glass; and we like the rear wash-wipe—unusually, you can wash without having to wipe. Mirrors are fine, as are headlamps.

Rear passengers will notice the

prominent central tunnel and cramped kneeroom, with a hard edge at shin level on the front-seat backs. The rear seat itself is comfortable, though headroom and wheel-arches tend to close in.

A tape measure reveals that the Starlet's interior is similar to that of the Chevette, but the Toyota's big asset is a divided folding seat-back arrangement. However, even this versatility cannot match the Derby's capacity to swallow luggage, mainly because the load floor is so high, with the spare wheel stowed beneath. The area is neatly trimmed, though, with tools and the rear-wash bottle concealed and out of the way.

Our dislikes include the prominent load sill and seat-squab catches that simply aren't up to their job. The load canopy is a poor afterthought, too.

Heating is powerful when fan-assisted—it's very quiet—but ram-flow is poor unless a window is opened a crack. Heat doesn't reach the rear floor in comforting amounts, but front occupants are generally well satisfied in summer or winter. The floppy central ventilator grilles also respond to the fan, but not the outboard pair.

We are a mite disappointed by the Starlet's injury-prevention package, especially after such good work in accident avoidance. There's not enough roof padding, and those rear-seat catches and inconvenient static belts fail to inspire confidence.

The windscreen may be tinted but it's not laminated; and the fuel tank, just inboard of the rear bumper, is too exposed for comfort. The 5-door does, however, have proper childproof latches, unlike the Corolla and too many Japanese 4-door saloons.

Living together

Home mechanics will open the bonnet of the Starlet and admire the easily accessible and impeccably polished works. There was no such thing as an oil seepage, or rusty clips, on our test car, and, although the front of the exhaust was corroded externally, the rear is aluminised to keep rust at bay.

Underbody, however, protection is still too hit-and-miss to be

reassuring. Petroleum wax-type material is sprayed over the floor panels and channels on view, but the gun's range falls short of more-obscure areas, and nothing other than paint and primer reaches box sections. It is a good coat of paint, though, with conscientious preparation and penetration into door-flange recesses and channels and not a nib or miss in sight.

Wheelarch liners stand guard under the front wings, but mud-harboured ledges remain. The bumpers seem worthy of the name.

Inside, the materials are very practical—the load area's carpet is tough and well-secured—but some people may think that it lacks plushness at the price. Nonetheless, the Starlet is comprehensively equipped: a (modest) radio is standard, and there's a clock and lighter, too.

Routine servicing every 6000 miles is straightforward, although such old-fashioned thoroughness as Toyota's makes the Starlet's schedule more time-consuming—and therefore more expensive—than that of most European cars. Parts prices are mildly expensive—about on par with VW—and, with Toyota seemingly uninterested in winning sales by fiercely competitive pricing, depreciation is heavier than for some other Japanese models.

Verdict

The little Toyota is very much a starlet performer, and fuel consumption is equally unexceptional, but it does win prizes for its refinement and easy, undemanding nature. Despite inescapable similarities to the Chevette in concept, it feels very different on the road—more competent as an all-rounder, if rather colourless. On a journey, drivers will probably find themselves concentrating on the radio or their passengers, so little an impression does the car make.

This could be damnation by faint praise or a splendid compliment, especially as it is likely to maintain its boring reliability over many thousands of miles.

Perhaps it's the ideal small car for motorists who don't really like motoring...

VOLKSWAGEN DERBY LS

Front engine: 1093cc/4cyl, OHC (belt), one Solex single-venturi carb, 50bhp at 5800rpm
Front drive: 4 gears; 14.6mph/1000rpm
Suspension: front—ind MacPherson struts, coil springs, anti-roll bar; rear—dead axle, trailing arms, coil springs
Steering: rack and pinion, 3½ turns/30½ft circle; 4½J wheels, 145SR13 radials
Brakes: discs front/drums rear

Parts/repairs (inc VAT)
clutch £44.71 (fitting 3.75hr)
exhaust £56.55 (0.75hr)
headlamp unit £22.09 (0.4hr)
front bumper £34.36 (0.4hr)
laminated windscreen £40.50 (0.7hr)
oil filter and points £5.46 (0.3hr)
major service 10,000 miles (2.1hr)

	per year	per mile
Running costs	£535	4.46p
Loss of value	£136	1.13p
Total depreciation	£572	4.77p
Insurance group	3	

VAUXHALL CHEVETTE GL 3-dr

Front engine: 1256cc/4cyl, OHV (chain); one Stromberg single-venturi carb; 57.7bhp at 5600rpm
Rear drive: 4 gears; 15.9mph/1000rpm
Suspension: front—independent wishbones, coil springs, anti-roll bar, rear—coil-sprung live axle, torque tube, trailing arms, Panhard rod, anti-roll bar
Steering: rack and pinion, 4 turns/29½ft circle; 5J wheels, 155SR 13 radials
Brakes: servoed discs front/drums rear

Parts/repairs (inc VAT)
clutch £38.17 (fitting 1.8hr)
exhaust £46.44 (1.4hr)
headlamp unit £24.84 (0.3hr)
front bumper exchange £10.69 (0.7hr)
laminated windscreen £48.44 (1.8hr)
oil filter and points £2.41 (0.7hr)
major service 12,000 miles (3.6hr)

	per year	per mile
Running costs	£547	4.56p
Loss of value	£80	0.67p
Total depreciation	£585	4.87p
Insurance group	2	

TOYOTA STARLET 3-dr

Front engine: 993cc/4cyl, OHV (chain); one twin-venturi carb; 47bhp at 5800rpm
Rear drive: 4 gears; 16.4mph/1000rpm
Suspension: front—ind MacPherson struts, coil springs, anti-roll bar; rear—coil-sprung live axle, four links, Panhard rod
Steering: rack and pinion, 3 turns/31ft circle; 4½J wheels, 145SR 13 radials
Brakes: servoed discs front, drums rear

Parts/repairs (inc VAT)
clutch £37.89 (fitting 2.3hr)
exhaust £49.05 (0.8hr)
headlamp unit (sealed beam) £12.90 (0.5hr)
front bumper £18.77 (0.7hr)
laminated windscreen £38.54 (2.3hr)
oil filter and points £4.22 (0.8hr)
major service 6000 miles (av 3.6hr)

	per year	per mile
Running costs	£557	4.64p
Loss of value	not yet known	
Total depreciation	not yet known	
Insurance group	3	

THE RIVALS CLOCK IN

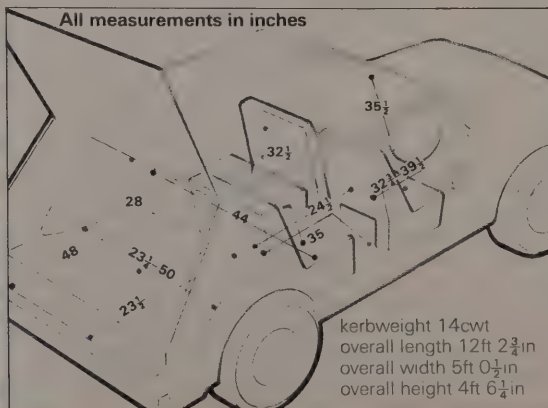
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Ford Fiesta 1.1 L

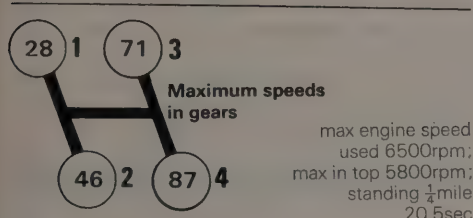
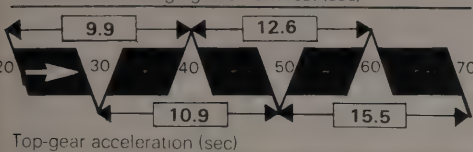
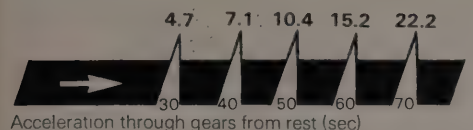
Honda Civic GM

Peugeot 104SL

Chrysler Sunbeam 1.3 GL

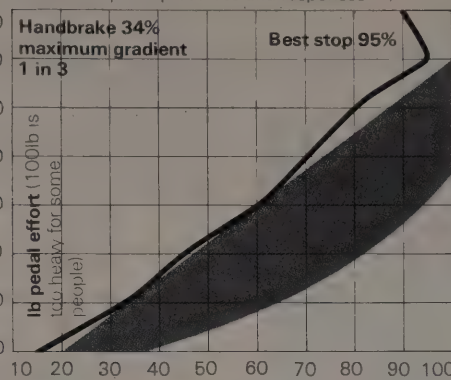


PERFORMANCE



max engine speed used 6500rpm;
max in top 5800rpm;
standing ¼ mile 20.5sec

BRAKES—pedal pressures and responses



% efficiency (ideal car's braking performance falls within central zone—above, too heavy, below, too light)
Fade test pedal pressure needed for 75% stop (ideal car would show no variation)
75lb at start; **60lb** in constant use; **75lb** in severe use
Watersplash 80lb at first, 2 stops to recover

FUEL 2-star/91 octane min
overall consumption 38mpg
effective tank range 260 miles/6¼gal

Normal range of consumption

short journey, suburban	29mpg
hard driving, heavy traffic	31mpg
motorway—70mph cruising	33½mpg
mixed roads—brisk, 50mph cruising	38½mpg
quiet rural—40mph cruising	44mpg

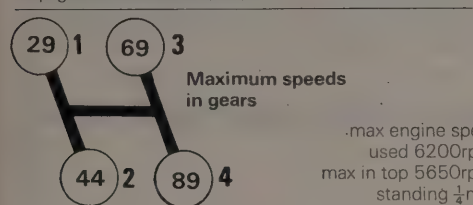
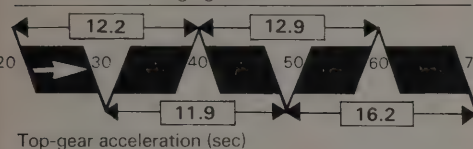
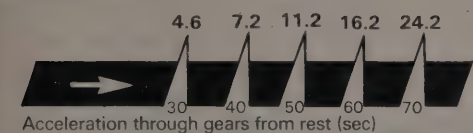
Consumption at steady speeds

30mph	57mpg
56mph	42mpg
70mph	33½mpg
max mph	25mpg

SAFETY CHECKS O = factory fitted option

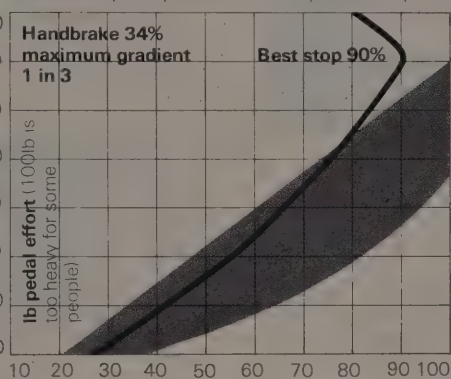
steering: energy absorbing?	No	hazard warning: fitted?	Yes
front seats: secure mounts?	Yes	interior: well padded?	No
head restraint?	O	w/screen: laminated?	O
front belts: effective?	Yes	doors: crashproof?	Yes
convenient?	Yes	childproof?	Yes
rear belts: fitted?	No	petrol: spillproof?	Yes
		brakes: failsafe?	Yes
		load sensitive?	No

PERFORMANCE



max engine speed used 6200rpm;
max in top 5650rpm;
standing ¼ mile 20.4sec

BRAKES—pedal pressures and responses



% efficiency (ideal car's braking performance falls within central zone—above, too heavy, below, too light)
Fade test pedal pressure needed for 75% stop (ideal car would show no variation)
60lb at start; **60lb** in constant use; **60lb** in severe use
Watersplash immediate recovery

FUEL 4-star/97 octane min
overall consumption 37mpg
effective tank range 260 miles/7gal

Normal range of consumption

motorway—70mph cruising	30½mpg
hard driving, heavy traffic	32mpg
short journey, suburban	32½mpg
mixed roads—brisk, 50mph cruising	38mpg
quiet rural—40mph cruising	45½mpg

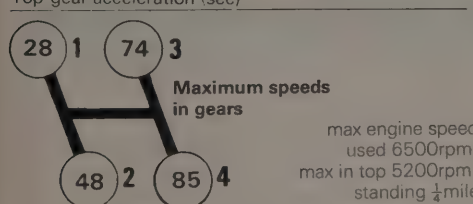
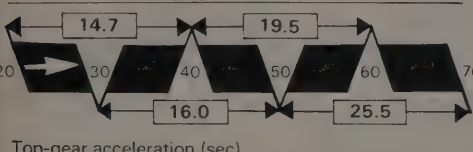
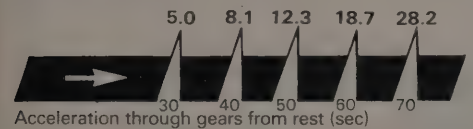
Consumption at steady speeds

30mph	55mpg
56mph	41½mpg
70mph	30½mpg
max mph	19½mpg

SAFETY CHECKS

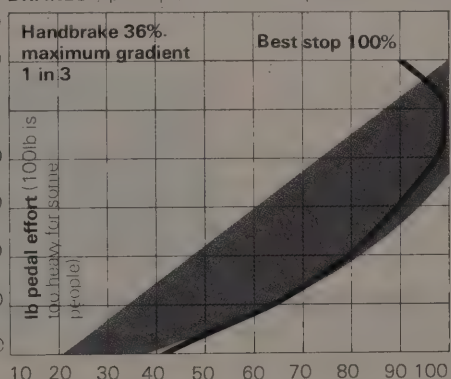
steering: energy absorbing?	Yes	hazard warning: fitted?	Yes
front seats: secure mounts?	Yes	interior: well padded?	No
head restraint?	No	w/screen: laminated?	No
front belts: effective?	Yes	doors: crashproof?	Yes
convenient?	No	childproof?	Yes
rear belts: fitted?	No	petrol: spillproof?	Yes
		brakes: failsafe?	Yes
		load sensitive?	No

PERFORMANCE



max engine speed used 6500rpm;
max in top 5200rpm;
standing ¼ mile 21.4sec

BRAKES—pedal pressures and responses



% efficiency (ideal car's braking performance falls within central zone—above, too heavy, below, too light)
Fade test pedal pressure needed for 75% stop (ideal car would show no variation)
35lb at start; **35lb** in constant use; **35lb** in severe use
Watersplash 45lb at first, 4 stops to recover

FUEL 3-star/93 octane min
overall consumption 38½mpg
effective tank range 290 miles/7½gal

Normal range of consumption

hard driving, heavy traffic	31½mpg
short journey, suburban	32½mpg
motorway—70mph cruising	33½mpg
mixed roads—brisk, 50mph cruising	40½mpg
quiet rural—40mph cruising	47mpg

Consumption at steady speeds

30mph	62½mpg
56mph	42½mpg
70mph	34mpg
max mph	25mpg

SAFETY CHECKS

steering: energy absorbing?	Yes	hazard warning: fitted?	Yes
front seats: secure mounts?	Yes	interior: well padded?	No
head restraint?	Yes	w/screen: laminated?	No
front belts: effective?	Yes	doors: crashproof?	Yes
convenient?	No	childproof?	Yes
rear belts: fitted?	No	petrol: spillproof?	No
		brakes: failsafe?	Yes
		load sensitive?	No

PRICE (£)	CAPACITY (CC)	FUEL OVERALL (MPG)	MAXIMUM SPEED (MPH)	0-60MPH (SEC)	30-50MPH IN TOP (SEC)	BEST STOP (% g/lb)	OVERALL LENGTH (FT/IN)	MAXIMUM LEGROOM FRONT (IN)	TYPICAL LEGROOM REAR (IN)	STEERING TURNS/ CIRCLE (FT)
2605	1049	39½	84	16.4	13.8	92/80	11' 11½"	37	38½	3½/32
2766	1118	38	85	15.9	12.3	97/50	11' 8½"	40	39½	3½/31½
2745	1238	36½	83	15.5	10.8	88/35	12' 0"	40	37½	3½/32½
2984	1124	35½	89	15.2	11.4	88/60	11' 10½"	39½	35½	3½/31½
2964	1295	33½	87	16.6	14.4	98/60	12' 7"	40	35½	3½/30½

Everyman

To give our car-testing panel of readers more time behind the steering wheels, we've pruned their number to three. This issue, Everyman regulars Denise Bewsy, a 21-year-old office manager from St Albans, Herts, and Roy Kidman, a 55-year-old insurance broker from Weybridge, Surrey, are joined by Andrew Perry (centre, above), aged 34, from Knaphill, near Woking, Surrey.

Andrew is married with three children, and another due on 2 March; usually, he drives a 3litre Ford Granada estate, covering

30,000-40,000 miles a year in his business as an antiques dealer. His wife Christine also runs an estate—a Hillman Avenger. Says Andrew, 'My cars *have* to be estates: the younger the children, the more luggage you seem to need, and mine are six, three and 18 months. We also have Samantha, our labrador.'

'I'll be selling the Granada when it has covered 50,000 miles—that, I think, is the cheapest way to do it—but I've not decided what to buy next. It's not that I'm dissatisfied with the Ford, simply that I'd like to try something else.'

Newcomer Andrew found himself voting with the majority on DRIVE's hatchback variants: he didn't regard the booted VW Derby as being in the same market as its two three-door rivals, and he rated the Toyota Starlet above the Vauxhall Chevette. Denise agreed with Andrew, but Roy—still convinced that Japanese cars are unreliable and depreciate quickly—favoured the Chevette ahead of the Starlet.

It has to be said that the voting was undoubtedly influenced by faults peculiar to the Everyman panel's Derby, which developed first- and second-gear problems on the readers' test day...

VW DERBY LS

'I like its external appearance,' said Andrew Perry, 'especially the bumpers and the protection on the leading edge of the rear wheel-arches. The paintwork is better than the Chevette's.'

'I must admit that the Derby's performance is certainly the best of the three, but at times I found it difficult to hit the right pedal, and the steering is very woolly. I know it's a side-effect of VW's anti-skid steering system, but...'

Denise Bewsy agreed with Andrew about the Derby's overall design: 'It sets out to satisfy a completely different requirement to the other two cars. I suppose



that, if it had been a Polo, I'd have put it second to the Toyota.'

'That said, performance is good, with a nice ride, and the steering didn't worry me—I found it easy to drive. I didn't find any fault with the pedals other than that they were slightly high.'

Roy Kidman summed up for the

trio of amateur testers: 'A good ride, fair roadholding, steering not so good.'

'The pedals are poor, too: the accelerator is too close to the wheel-arch—I had to use the side of my foot on it—and it needed far too much pressure. The brake, however, is very soft and spongy.'

'The plasticky interior hits you in the eye and tends to cheapen the car. Instruments are clear, but again basic, and I don't like the principle of those seatbelts—the thin metal levers that hold down the webbing look like they could be dodgy in a crash.'

DRIVE professional tester

Richard Taylor had to excuse the sickly Derby that the panel tested: 'The gearbox is untypical. It's normally a nice action. But the familiar spongy brakes must be a big problem for Volkswagen...'

'I'm glad to hear that Denise liked the Derby's general handling: it can be an exciting car once you get attuned to it, and very rewarding to drive quickly. She's entitled to her opinion that it handles better than the Chevette—it's just that I can't agree. And Roy needn't worry about the Toric seatbelts' design: the arm exerts less strain on the webbing than many other designs.'

VAUXHALL CHEVETTE GL 3-dr

While two of the amateur testers rated the Chevette second to the Starlet, the British contender topped Roy's list. 'A good ride, excellent handling and roadholding, and a very good driving position, with well-spaced pedals and progressive brakes,' he summed up. 'It's a very old engine, but it's tried and tested.'

'There isn't a lot of legroom in the back, but, when I put the rear seat down, I had to admire the carpeted load space: it should help to keep the noise down and stop luggage banging about. But I didn't like the headlamp treatment—it spoils the front end.'

Denise commented: 'I was disappointed with the paint finish—it was shocking. Even the coach-lines were badly applied.'

'The driving position is utterly wrong for me: I could hardly reach the gear lever, and fourth was difficult to find. The car did handle fairly well, but the ride was nothing special, and it was noisy, too. Mind you, *anything* is quieter than my old Ford Cortina.'

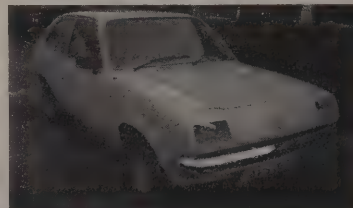
'Starting with the outside,' said Andrew, 'I thought the bumpers were very skimpily chromed and the paint poor—you could pick it off with your fingernails.'

'Maintenance is made tiresome

by the way you have to stretch over the droop-snoot to get at the battery and so on.'

'I did like the interior, but access to the back seat is more difficult than in the Toyota—and, once in, it's too narrow. Vauxhall has sacrificed comfort for legroom.'

'That said, the Chevette is



definitely quicker off the mark than the Toyota—at high revs it sounds as sweet as a sewing machine—and the gear shift and roadholding are good. I'm not worried about having nowhere to rest my left foot. I tend to ride the clutch, anyway...'

'Naughty fellow to ride the test car's clutch,' said Richard Taylor, 'but Chevette owners are almost encouraged to adopt the bad habit. I can assure him that the engine is easy to work on, but it is beginning to show its age compared to the Derby's. If Vauxhall could do a heart transplant, it would make such a difference.'

TOYOTA STARLET 3-dr

It may have been the star for the majority of DRIVE's amateur testers, but the Starlet did not shine from all angles...

'I'd certainly buy one, if I had the money,' said Denise. 'While I wasn't happy going fast—I felt it wouldn't stand up to it—I thought it was the quietest of the

three cars. It's nice-looking, with a good ride, ideal driving position and superb gearbox.'

'I didn't have much time in the back seat, but it could surely have been more generous: the cushion is too narrow. And the seatbelts almost spoil the car completely: I had to fight to get into them, and couldn't adjust them at all.'

'I thought the engine was eager to rev and very responsive,' said Roy. 'Gears and ride are good, too, and so is the roadholding. On the debit side, though, the interior trim is too black, instruments are adequate but basic and, worst, the static seatbelts are hopeless.'

'It might feel reasonable on the

road, but I put the Starlet second. It's Japanese, and my experience is that such cars are good for 18 months and then get expensive.'

Andrew started by looking under the bonnet. 'From a maintenance point of view, the Toyota is superior. I like the rubber protective strips down the body, and I was impressed by the passenger seat—when you depress the knob to fold the seat back, the seat also slides forward to make way for rear-seat passengers.'

'I think the instruments are good, though I managed to wash the screen when I wanted to sound the horn.'

'I reckon this is the slowest car

of the three, but it has the best gearbox and a comfortable ride. The standard radio is obviously nice, and the aerial in the screen pillar is a sensible way to discourage vandalism.'

'I agree with the Everyman team about the inconvenient static seatbelts in the Starlet,' said Richard Taylor. 'However, Toyotas *do* have a reputation for reliability—it's one of their selling points. In fact, if Japanese cars were unreliable, most wouldn't sell at all. Most buyers can't get enough of such cars, though some enthusiastic drivers find that the Starlet's polite manners are boring.'



SuperSix car tests continue on page 40: Honda Accord, Morris Marina, Ford Escort

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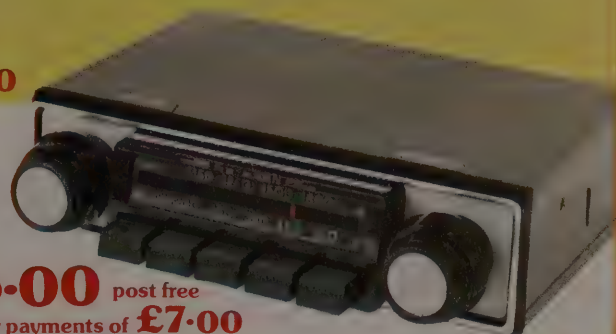
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Every picture fills a storey



Remember psychedelia? This was London's Portobello Road at the end of the 1960s—the zenith of flower power. The boutique owner has since had it painted over with a scene of people climbing naked on to the roof.



Hit or a miss? This is, in fact, a handpainted advertisement for a record, done on the gable-end of a building overlooking Shepherd's Bush, W London. It may not carry the community message of most murals, but it's probably more tasteful than most advertisements found in more conventional media.



Above: All our own work. This was a corner bomb site in Covent Garden, in the heart of London, until locals got together to convert it into a chess garden. The giant mural on the gable-end of the building above it gives a person-by-person account of their efforts. Covent Garden has been especially rich in murals over the past few years—there's another on the facing page—with the vegetable market moving out and leaving the buildings to developers. Many are now being developed...

Left: Two scenes from the longest mural in Britain. Painted along 1500yd of railway cutting in Gospel Oak, N London, by local children and adults—they call themselves the Flying Hearts Squad—it is a pictorial collection of fact and fantasy from all over the world. It took the group 18 months to complete and cost around £3000. Sadly, it is now beginning to show signs of neglect, with BR's wall crumbling, the weather wearing away at the colours and weeds and plants encroaching on the pictures. In fact, the writing for this work may be on the wall.

Safe at any speed



'DRAG FACTOR' is currently an in-phrase in automobile engineering, where the science of aerodynamics is being taken seriously by some young engineers . . . and over-simplified by those whose job it is to sell new styles. The result is that all sorts of claims are being made for streamlining's ability to cut fuel bills drastically.

It does help, of course, at speeds above 50mph, but it has no measurable effect in urban motoring—and may create problems.

We read and hear about this or that car slipping smoothly and silently through the air it displaces as it travels, keeping its windows free from road dirt and even rain spray. How revolutionary it all sounds. But is it all that novel?

Automobile trends in fact follow a 10–15-year cycle that coincides roughly with each new generation of engineers rediscovering what others have found before them.

There is more to aerodynamics than making a car an approximation to the best aerodynamic shape: an elongated raindrop. Such a car style was tried in Germany in the 1920s . . . and even racing drivers experienced great difficulty in keeping it on line in windy weather.

Engineers have learnt a great deal since then. But have they fully mastered it all? How many times have you passed a high-sided vehicle on a motorway in blustery conditions . . . and found your car steering its own course?

It takes between 0.2 and 0.6sec for an alert driver to react to this disturbing effect, and it may be another 0.6–0.8sec before the car begins to respond to steering correction: at 70mph this means travelling some 80–145ft.

Cars can be designed to be rock-steady when passing quickly through the wind 'shadow' of a high-sided truck. Yet many modern cars are unstable in such situations, and suffer from delayed response to steering correction. Clearly, more can and should be done to make them safer.

Low fuel consumption is important, of course, but it isn't everything. In every endeavour to improve the drag factor, engineers must not forget that equal attention should be paid to refining suspension, steering, tyres and wheel rim specifications as well.

In car design, it's not good enough to improve one feature. It's the total concept that counts.

MARCUS JACOBSON
Chief Engineer of the AA



This is Britain's biggest mural, claim the artists of Battersea, S London: two years of painting across 4000sq ft. It depicts 'bad' Battersea—derelict factories, flats—being swept away to make room for play areas and low-price housing.



French windows—two fenêtres in Paris, but only one is real: the other is painted. The righthand painting was real enough to fool passers-by. But one outraged Parisian put a stop to that: he threw a pot of paint at it.



Meanwhile, back in the garden—this mural was done by N London schoolchildren in Covent Garden. Just out of picture, though, are some flying pigs drawn by local artists who admit that they were simply overcome by a desire to daub.

OUR CITIES are crammed with empty canvases: contractors' hoardings, the undersides of flyovers, the backsides of bus shelters, or just blank walls—all waiting for something to happen.

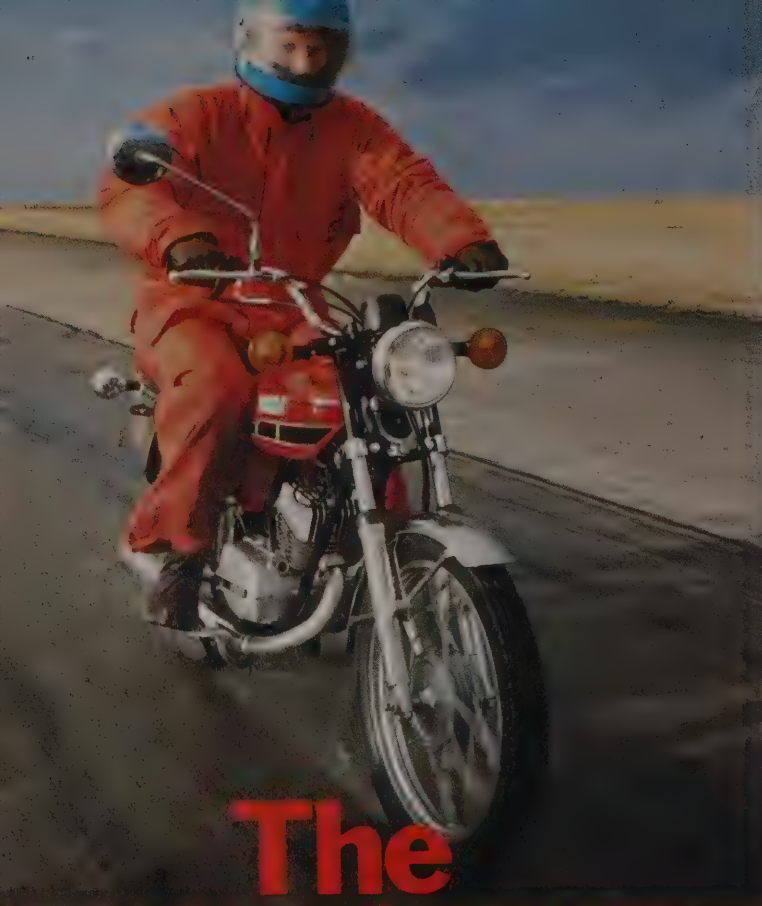
And, sometimes, something does happen. In recent years, street art, having spent far too long on the pavement, has begun to spread vertically, and with official approval and aid. No matter that the new canvas is a brick wall half a mile long, or a gable end oozing drainpipes from every pore, or an irregular palisade of corrugated iron—the new breed of mural artist is equal to the challenge. To such 'giants of the roller-brush' as Rochdale's Walter Kershaw, Manchester's David Vaughan or London's Peter Carey, any bare wall has irresistible appeal.

Mural painting in Britain has a short history, yet it has already passed through several phases. It seems to have begun in the late 1960s, with the decorated shopfronts of Carnaby Street and King's Road. It went through an 'Arts Council-approved' period, notably in Glasgow. Finally, it seems to have become part of the growing community-arts movement: just as no housing estate is these days complete without its poet-in-residence, so no blighted backwater is complete without its freshly-daubed mural.

These are no slap-dash affairs. They take time to plan (official consent and, more important, local approval must be obtained); time to execute (18 months in the case of the Lismore Circus spectacular in London's Gospel Oak); and they cost money (London Arts Workshop spent £11,000 on a big mural on the underside of Westway flyover).

Murals, in fact, are meant to last. In this, and other respects, they differ sharply from graffiti, which is anonymous, anarchistic and done, as it were, on the run. But many, it's true, are crudely executed and laboured in their attempts to be socially 'relevant': we have yet to see work of the scale and stunning simplicity of the best Californian and Chicago wall-painting—a single, giant wingnut or packet of cigarettes, spread across 10 storeys!

Almost all murals, however, improve their surroundings. And for those who prefer gazing at raw concrete—well, there's plenty of that left, too. ALASTAIR BEST



The men from the boys





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A *rich man* wants tax-free profits. He can buy a 5% Treasury stock for around £63 a unit which the government will repay at £100 in 1989. Bingo!—a tax-free gain of £37 on each £63 invested which works out at more than 58%.

A *not-so rich man* needing extra income can buy a Treasury stock paying him 12½% and his money back in 1983.

A *youngster* could buy a Treasury loan yielding about 14% at its present price right up to 1998. If he wanted to plough the interest (after tax) back in every year, he could end up with five times as much capital as he started with. And there's a stock that would multiply it 25 times in 38 years in this way.

An *older investor* might prefer the 12% Treasury stock repayable in 1983—only four years away.

To an organisation lucky enough to be exempt from income tax—such as a recognised charity or pension fund—the returns of 12% and 13% a year are very good news indeed.

ROBERT HEAD

HOW MANY fathers—and mothers, too—recall their road-burning youth when signing the cheque for their 17-year-old's first snorty (Japanese) motorcycle?

If German giant BMW has it right, an increasing number not only recall but are ready to return to two wheels, forsaking the week-day car at weekends for the freedom and style of big-name, big-bike riding, and it has recently transferred investment capital from car production to motorcycles to meet the trend. The result is the new medium-weight range of R45 (450cc) and R65 (650cc) models.

Mindful of BMW's paternal objective, DRIVE put an R45 through its paces... but also tried a flyweight, 100cc Japanese bike that sons would love to own: Yamaha's peppy RS100.

BMW R45 Price £1699

BMW studiously avoids vogueish trends and planned obsolescence with a shaft-driven, flat-twin design that first saw the light of day more than 50 years ago. It's a policy that has been described as arrogant... but it's vindicated by the R45's confidence-inspiring performance.

Though our test machine's choke required careful setting for cold starts, the four-stroke engine fired reliably on the standard electric starter (kick-starting is available as an option!) and settled to a mellow, comforting throb.

While useful acceleration from 26mph in top gear makes the R45 an ideal city bike, the machine is even better on the open road where, over 3000rpm (40mph in top), power delivery is liquid-smooth. Acceleration through the gears is ample up to 80mph, above which it gradually fades to a top speed of 93mph that can be improved to 100mph-plus if the rider lies flat on the tank. Cruising at 80mph is effortless and less noisy than in most cars.

Sheer power may not be a BMW prerogative, but the R45's appeal is that its performance can be exploited confidently, thanks to superlative roadholding. High-speed stability is excellent, even in gale-force crosswinds.

Contrary to popular myth, we experienced not the slightest degree of upsetting lateral torque from the crankshaft during power changing—and the R45's prominent rocker-boxes don't grind on the road during hard cornering. The real old bogey—BMW's clunky cog-swaps—has been eliminated by an improved gear selector and a new shock absorber on the transmission shaft.

Reassuringly, the R45 stops as impressively as it goes. DRIVE's test bike was equipped with a rear drum and single front disc brake that provided perfect control and power, but current models

have fiercer twin discs up front. Thoughtful touches abound: a 0.44gal emergency tank provides a last-resort range of approximately 28 miles; there's an unusually powerful quartz-halogen headlamp; and beneath the hinged and lockable dual seat there's a toolkit, beautifully forged in chrome-vanadium, that's sufficient for major servicing. And there's a first-aid kit.

Few concessions to anything but sound engineering make the R45 ideal for home mechanics. The ignition system is conventional coil-and-contact breaker, valve pushrods are easily adjusted by ordinary locknuts, and there's no time-consuming, dirt-making chain drive.

It all adds up to more time to spend with the family and less money to spend on maintenance—two ideal excuses for the married man who fancies the R45's formula of safe, reliable weekend excitement.

Yamaha RS100 Price £435

Ideally, the novice's first motorcycle should be small enough for safe control yet sufficiently powerful to avoid the disadvantages experienced by riders of the puny moped—a delicate balance between the fears of parents and the ambitions of their youngsters.

Yamaha's RS100 may have an engine only twice as big as a moped's, but big-bike styling with a tubular steel frame, good suspension and generous physical dimensions help to make it attractive in the showroom. Its construction, while by no means rugged, is certainly sound, with a high-quality finish aimed to please newcomers to motorcycling and a standard package of centre and prop stands, adjustable-load rear suspension, rear grab-handle, excellent mirror, rubber-mounted indicators and helmet lock.

Probably the only part of the RS100 that belies its chunky image is the miniature 6v/2ah battery that powers indicators, parking lights, horn and stoplamp; a flywheel magneto supplies current to the ignition and to the barely adequate 35w headlamp.

Starting the test machine was

always a first-time affair, even on cold mornings, and it impressed with its featherweight-yet-positive controls and light handling.

In all major respects, the two-stroke engine performs satisfactorily, with the customary irritating exhaust note—though well-enough silenced. Considering the engine's diminutive size, the RS100's power at low speeds is generous. Fourth and fifth gears provide ample acceleration up to 45 or 50mph, but progress slows from 50 to 55mph, and creeps almost imperceptibly to a maximum of 60mph. Normal cruising speed is an optimum 50mph on half throttle—anything more requires wearying use of lower gears, higher revs and more fuel.

Most riders should see a little over 100mpg on 2-star, but aggressive riding can lower this to 66mpg. Refuelling calls for a word of warning: after tanking up with petrol, there's a separate, convenient oil tank that must be filled with proper 2-stroke oil. Car-minded owners might be lulled into filling it with 4-stroke—which will foul the sparkplugs.

Rustless steel disc brakes are now fashionable on even small machines—despite the fact that, once saturated with rain, the pads momentarily float helplessly on a film of water before gripping the disc. Thankfully, Yamaha has had the sense to ignore fashion, equipping its smallest motorcycle with a set of excellent small drum brakes that are gentle in operation, progressive to use, powerful and impervious to almost all weather conditions.

Suspension up front is big-bike style—a pair of two-way-damped tele-forks—but the rear is equipped with a pair of suspension units that are damped on the rebound only and allow 'wallowing' to start when the RS100 is ridden extremely hard. However, it's by no means dangerous.

Sadly, a blend of styling and mechanical niceties at a low price must have some snags. Despite its good paint finish, the RS100 demands careful maintenance, dry garaging, and, like its rivals, meticulous servicing that may not be to every owner's taste.

HOW THEY MEASURE UP	BMW	YAMAHA
Engine	Air-cooled, ohv, 4-stroke twin	Air-cooled, reed valve, 2-stroke twin
Output	35bhp at 7250rpm	11bhp/8500rpm
Transmission	5-speed shaft drive	5-speed exposed chain
Kerbweight	455lb	222lb
seat height	30½in	29½in
max width	27in (engine)	28in (handlebars)
max length	83in	76½in
Fuel tank	4.84gal/305 miles (gross)	2.2gal/228 miles
Mpg—overall	63	104
quiet use	74	135
suburban use	56	91
brisk use	63	78
hard use	48	66
Performance—max	93mph	60mph
0–50mph	8.2sec	14.7sec
30–50mph (top)	11.2sec	24.3sec
Warranty	12 months/unlimited miles parts and labour	6 months/10,000 miles parts and labour

Clinic

Any problems? Whether they are technical, insurance or legal, DRIVE's experts can help. Write to: Clinic, AA, Fanum House, Basingstoke, Hampshire RG21 2EA

Cut it out

Dirt has become ingrained into the metallic paintwork of my car, and no amount of ordinary washing will shift it. What can I do?—R MAY, HENFIELD

Regularly washed metallic paintwork should retain its original condition for a long time, but, if it's not looked after, it doesn't weather as well as conventional paintwork: a few years of neglect can cause it to lose its gloss, and, when the top coat breaks down, dirt can accumulate that normal washing simply won't remove.

You should use an abrasive restorer such as T-Cut, applying it lightly as directed: excessive pressure will damage the aluminium flakes in the metallic paintwork, causing patchiness.

Vinyl decision

The oatmeal-coloured vinyl roof on my Ford Cortina has become

discoloured around the sunroof, and I'm unable to restore an overall colour with any type of cleaner.—J W T BEISLY, YORK
The discoloration has probably been caused either by the adhesive used or by the effects of the sun's ultra-violet rays (or both), and a leading manufacturer of vinyl for car roofs says that there is nothing you can do that will restore the original colour.

However, you might try brushing the roof with a shoe polish of a similar but darker shade to that of the original colour in order to tone-in the discoloured areas. If this doesn't work, you may have to consider dyeing the roof black with special vinyl roof paint, available from most accessory shops.

Saucy Simca

I've noticed that a greeny-brown 'pus' accumulates under the oil-filler cap and on the inside of the rocker cover of my Simca 1100GLS. How can I prevent it forming?—B SAUNDERS, GORING-BY-SEA

What you call 'pus' is usually referred to as 'mayonnaise', and is caused by condensation in the crankcase mixing with the oil. Transverse-mounted engines, such as the Simca's, are prone to it, as the whole side of the block is chilled by cold air. Short, stop-start trips in which the engine never reaches optimum temperature can also

aggravate the problem; on longer journeys, the condensation evaporates.

Some owners try raising the car's temperature by fitting a thermostat of a higher temperature rating; but it's safer in cold weather to blank-off up to three-quarters of the radiator, leaving the area round the electric cooling fan unobstructed. Remember, though, to keep a close eye on the temperature gauge.

Performing seal

A corner of the windscreen surround on my Ford Escort lets in water. I've tried injecting various proprietary sealants between the glass and the rubber, but the leak persists.—V BOND, BECKENHAM

The trouble is that dried sealant, dirt and moisture already trapped in the rubber are preventing the fresh sealant from flowing into place and adhering properly. Probably the only way to cure the leak is to remove the windscreen, thoroughly clean the rubber groove and the edge of the glass, then refit with fresh sealant.

Sealed lips

I bought a small can of Radweld the other day, and was staggered at the price—72p for 9.68fl oz. What can radiator sealant be made of that costs £11.90 a gallon?—W J COOK, WATERLOOVILLE

DRIVE put the question to Radweld's manufacturer, Lloyds Indus-

tries, and the brief reply is that the maker is under no obligation to disclose the product's ingredients nor the reasons why they cost as much as they do. 'In any case,' the firm concludes, 'it's a lot cheaper than buying a new radiator.'

Facial uplift

I've recently bought a 1976 Austin Allegro 1300, and should like to fit a tachometer in the blanked-off hole alongside the speedo which I believe is for an optional clock. My local dealer says that it's not possible, but I'm sure I've seen a rev counter in the Allegro 1500.—G DAWSON, NORTON

Unfortunately, it's not just a matter of removing the blanking disc and fitting the up-market Allegro's tachometer: there simply isn't sufficient depth in the 1300's binnacle to accommodate the instrument. You would also need a different printed-circuit board.

Greasy head

I want to strip, clean and reassemble my speedometer's cable in an attempt to cure its wavering needle. Some people say that the inner cable should be dry when reassembled, others that it should be oiled or greased. What's your opinion?—L BERESFORD, PLYMOUTH

The inner and outer cables should be washed thoroughly with paraffin and dried, and the inner cable

CHASES WATER OFF MILD STEEL PLATE IN 7 SECS!



HOLDS CAR IN SHOWROOM CONDITION ENTIRELY RUST FREE!

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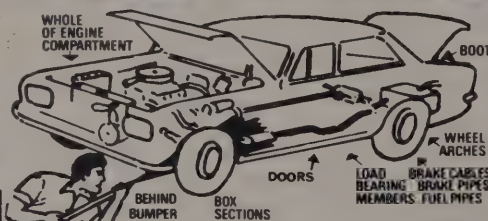
NO NEED TO CRAWL UNDER CAR (in most cases). Finnigan's Applicator forces airless spray into entire car underbody. **HEAVY COATING.** One gallon equivalent to THIRTY aerosols at one sixth of cost!

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WHY BIG WORLD USERS TRUST WAXOYL RUSTPROOFING

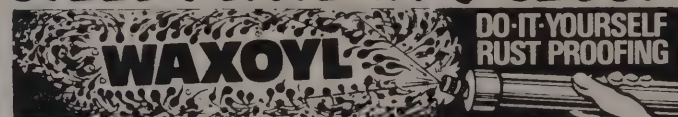
WAXOYL DOES AS IT SAYS. Kills rust. Users report: SWISS GOVT. LAB TESTS: 'Rust stopping qualities very good'. CITROEN CAR CLUB: 'Fantastic stuff'. BRITISH STEEL CRPN: 'Most satisfactory'. SWISS AUTO RACING A.G.: 'Clean, easy application. No after-cleaning'. WESTERLY MARINE, PORTSMOUTH: 'Waxoyl protection excellent on marine diesel oil tanks'. (Tank bases otherwise impossible to rustproof, standing on supports). MOTOR MAGAZINE: 'Remains active indefinitely'. CHRYSLER CENTRE, BASEL: 'Application so clean. Entirely satisfied'. ROVER SPORTS REG. MEMBER: '197,000 miles. No sign of Waxoyl penetration'. LEICESTER: 'On '72 Beetle,

MIN. PREPARATION. NO SKILL. NO SPECIAL EQUIPMENT. Thin dust layers act as 'binding' agent. FINNIGAN'S APPLICATOR rustproofs wheel-arch in only 30 SECS! Forceful airless spray up to 4ft long. 100% EFFECTIVE SWIRLING ACTION and shaped nozzle, sprays right into small screw holes. No drilling. No mess. No waste.

since new: extremely satisfied.

NEVER COMPACTS WITH AGE Waxoyl flexes with vibration, outlasts conventional underbody seals that as you've probably observed, often oxidise, crack, flake off. Expose metal to air moisture rusting. Waxoyl actually benefits existing body seals, prolongs life. Makes and keeps them soft and supple. As further bonus, Waxoyl re-seals broken areas. Kills invading rust spores. Holds top book price value!

WAXOYL is clean, exceptionally easy and quick to apply. Order now, deal direct with an old established manufacturing concern, with world wide reputation for honesty and fair dealing. Order with every confidence.



RUST GNaws UPWARDS to metal surfaces, despite dedicated polishing. Factory-NEW cars hide rust pinpoints within faulty seams, spot-welded joints. Assembly line rivets, bolts, crack paint on prefab panels. Rust air damp creeps through thinnest gaps. Grows, spreads, penetrates. Gnaws metal. Brush-on rust killers can't restore surface bubbles damage. Every inch of surface rust scraped and painted over still leaves devilish rust on the UNDER side. Hidden! And deep in-below corrosion weakens suspension, load-bearing members, brake cables, silks, box sections. The very vital spots that Waxoyl rustproofs for evermore! Lowers depreciation by at least £150 p.a.

Most up to date rust inhibitor known to science?

Waxoyl's rust inhibitor sets it apart from all rival systems. Believed to be the most up to date (according to world users) because Waxoyl polarises the metal, prevents electrolysis, halts corrosion. **Prevents reactivation!** Never exhausts itself with time, like chemically activetypes used by many rival rustproofers. **TRADE HOUSES CHARGE UP TO £80 for rustproofing, mostly for labour. DO-IT-YOURSELF with Waxoyl at only ONE TENTH of cost.** Pay simply for raw materials at manufacturers' prices. Save up to 50% on many competitors' materials. Needs no further attention apart from 30 sec. wheel arch Autumn check.

FORGET CORROSION. Waxoyl micro rust killer inhibitor resembles tadpoles! 'Tails' penetrate oil, grease, mud with magnetic speed attracted to metal like dust to LP records. With deadly efficiency molecules sink deep into every minute pore within entire vehicle surface. Replaces air moisture stops and KILLS iron oxide

PROTECTS IN GRUELLING WINTER conditions. One simple, quick WAXOYL application NOW ensures complete protection. **WAXOYL KILL** rust outright, doesn't just slow it down. Send now. Per return despatch with easy, illustrated instructions.

KILLS SUMMER DAMP HAZARDS on wet, sticky days. Protects raw metal edges within silks, box sections, door panels as trapped condensation drips into pools of moisture, even in garaged car. **FORGET CORROSION!**

ORDER DIRECT. Personal callers welcome 9 till 4.30 Mon.-Fri. MINI & 1100 SIZES. 5 litres (1.1 gal.) £4.98 + 85p carr. LARGE SALOONS: 10 litres (2.2 gal.) £9.27 + 85p carr. 20 litres (4.4 gal.) DRUM £17.16 + 95p. Finnigan's Applicator £1.95. 28pp/p. **TRIAL OFFER:** 500 ml (.88pt) TIN for your trigger oil can test behind chrome strips (or brush on door edges, free brake linkages, etc.). Watch Waxoyl chase water off a simple metal strip. Quite amazing! Send 85p add 58p.

To FINNIGAN'S LTD (D.R.W.) Eltringham Works, PRUDHOE, Northumberland. Ph. 0661 32411

Rush my order as shown (please tick)

☐ 5 litres Chq/PO/MO/cash £.....

☐ 10 litres

☐ 20 litres

☐ 20 litres

☐ Appli- Block Caps

☐ Trial Offer Address

Regd Office 354 180 (London)

should be wiped sparingly with light oil before refitting. A thick oil or grease will only aggravate needle-waver, and the lubricant could work its way up to the speedometer head to cause further problems.

Complete washout

I'm plagued by algae that live in my windscreen-washer reservoir (the Ford type, that can't easily be removed), and clumps frequently block the pipe's filter. Is there an additive that I can use to kill this pest? Would distilled water help?—M TILBURY, WINDSOR

The growth will also occur in distilled water, and there's no way to prevent it other than regular use of screenwash fluid—after cleaning out the contaminated reservoir with detergent, Milton or Campden tablets (as used in wine-making) and a bottle-brush. The barbed spring-clips that retain the Ford reservoir can be levered off their pegs with a screwdriver, but you will need new clips to replace them.

Pep talk

I bought a new battery to solve winter-starting troubles, but the original still has some useful life. Can you tell me how best to store and maintain it?—G STONE, EYE
Top-up the cells with distilled water and charge the battery fully, then clean the casing and store in a cool area. Check regularly the specific gravity of the electrolyte with a

hydrometer to ensure that the battery is holding its charge and, if necessary, give it a booster charge.

Regular checks are essential, for if a battery is left flat for only a few days it will be a complete write-off. The sooner you fit it to a car, even for occasional use, the better.

Oil strike

I recently bought a secondhand car that uses a pint of oil every 400 miles or so. I was about to buy a gallon of oil to keep the engine topped up when I discovered more than half a gallon in a can that I bought when I last had a car, five years ago. Will this oil still be usable?—P BOYLE, SUNDERLAND
If motor oil is stored under reason-

able conditions—away from heat, for example—it has no specific 'shelf life', even when a can has been opened. Provided the inside has not gone rusty and the oil in it appears to be clean, it should be quite satisfactory. A leading oil manufacturer sums it up by saying: 'If it looks all right, it is all right.'

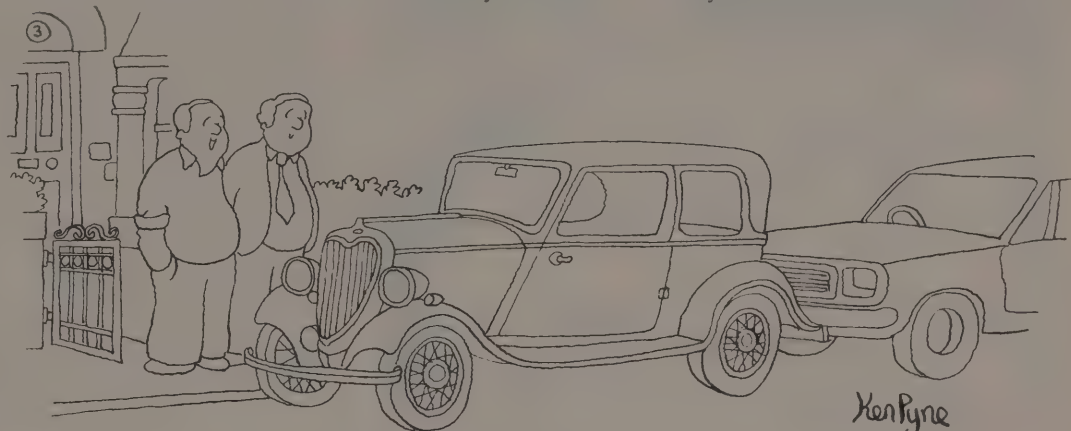
Conflicting statements

Last year I bought a new car by trading-in my old one and paying the balance in cash. I asked for an itemised statement and was told that this would be forwarded. It wasn't. Five months later the garage sent me a letter stating that my account was £200 in arrears.

When my solicitor eventually

obtained a statement of my account from the garage, it differed greatly from the agreed sale, charging extra for items that were supposed to be included in the price. Worse still, the allowance on the car I'd traded-in was less than that originally agreed. Can you advise me how I should now proceed?—A FENTON, BOSTON

Notify your local trading standards officer—an official of your local authority—of the details of the transaction, and ask him to consider whether an offence has been committed under the Trades Description Act. Act quickly, however, or you may be prevented from starting proceedings by the time limits imposed by the Act.



'Ten years ago it was a worthless old wreck, so I dumped it in a field in Dorset—last year I went back and saved it as an investment'



Special value holidays for motorists to CZECHOSLOVAKIA are offered through CEDOK, the National Travel Agency. Stay in inexpensive hotels and chalets and visit Czechoslovakia's ancient towns and castles, beautiful Prague and Bratislava, the romantic spas of Marienbad and Carlsbad or the breathtaking scenery of The High and Low Tatras. There is plenty to see and do, numerous lakes for swimming and angling, shop for souvenirs and enjoy the excellent cuisine. **For further details** of these and other package holidays to CZECHOSLOVAKIA please contact CZECHOSLOVAK TRAVEL BUREAU CEDOK (LONDON) Ltd. 17 Old Bond Street, London W.1. Telephone 01-629 6058.

Now AA members can get bargain holidays for £3.



Here's an open invitation to all AA members to join the AA Travel Club.

It's the latest addition to the AA's growing list of special deals for members.

A new service that provides low cost holidays around the world and numerous other travel advantages.

If you're already a member of the AA you can join the AA Member's Travel Club for just £3 per year (a mere drop in the ocean compared to the money you'll save).

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In fact, believe it or not, there are even more offers, bargains and perks to tempt you into applying for membership but they literally take up a whole magazine.

If you'd like to see a copy of the magazine with all the facts, just send the coupon below.

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☐ I include a cheque/PO for £3 annual subscription, please make me a member of the AA Travel Club.

☐ Please send me more information

Name

Address

AA Membership No.

Driver's mate

I CAN TELL left from right . . . with a bit of concentration; I can read; and I never learned to drive. These are the qualifications that get me called on to act as driver's mate, navigating on days out, business journeys, and what are jokingly called pleasure trips.

I don't enjoy navigating. Once at the wheel, drivers (usually husbands or relatives—no mere friendship could survive the strain) aren't inclined to overlook their mates' shortcomings. And they'll certainly reveal a few of their own within an hour on the road.

I don't volunteer my services, either—I simply don't have much option. 'I'm going to Salisbury tomorrow. I'd like you to come,' may sound flattering, but it means I've been press-ganged.

I know that any confidence in my ability as driver's mate is deeply misplaced, so I try to work out routes beforehand. I have two aids: one is The Map, an enormous chart of the British Isles, worn and patched with sticky tape; the other is a book of smaller maps all showing roads leading to the margin, where they come to an abrupt end with the words: 'See Over' or 'Continued on page 38'.

I note the main towns through which we'll be passing, and whether the route goes roughly up, down or sideways across the map. And later, to the driver's 'All right then?', the journey begins.

And it is all right for a while, because we both know the local area, and the depth of my incompetence has either been forgotten or has yet to be plumbed. At this stage, the only jarring note is the behaviour of other road-users.

While my driver roundly offers his opinion of them and their misdeeds, I need only sit back and agree. But I must admit to feeling inadequate when I'm asked to read their minds.

'What the devil is he going to do?' is hard enough to answer. But 'What the

devil does he *think* he's going to do?' is quite beyond me. I can only make soothing noises. The pattern of the journey is beginning to emerge.

My work starts when we leave known territory. At first, I rely on memory and signposts, which means trying to read several names in a flash—like having an eye test in a hurry. When I do manage to make out a name, it isn't one that I remember seeing on the map the previous evening. But there it is, posted mile after mile, unsought for and unheard of, while the town that I want gets no mention; clearly, it has disappeared without trace—or changed its name.

Having had little success with signposts, and with the atmosphere becoming frosty, I put on my glasses and open The Map. It spreads over the entire front of the car, rustling against the driver, who doesn't react well to the intrusion. I fold it, and have to keep turning it over and refolding it to find the sections as required.

All of this slows progress, increases heavy breathing, and brings only slight success if by chance The Map is up-to-date and in good repair.

I used to make predictions. 'We're coming to crossroads. The road forks left by a pub.' But we didn't, and it didn't.

I can remember once turning from one section to the next, and announcing: 'First right, Bootle.'

'Bootle?' squawked the driver. 'We're in the Cotswolds!'

We pulled up, so that the driver could see for himself this remarkable geographical phenomenon, clearly indicated. I waited for an apology. Instead came a bull-like roar.

'Who mended this map? There are umpteen sections stuck in the wrong place. Sunderland in the Vale of Kent; the entire Lake District upside down!'

On those frequent occasions that The Map fails, I open my book, which means I must keep making unpopular requests. 'The road continues on page 48. You'll have to wait till I find it.'

'With a queue of cars behind me?'

We slow down slightly. I had Aber-gavenny on page 13, but where is it on page 48? We're being hooted, and blood-pressure is rising. I track it down—in the top lefthand corner; on page 13, it was bottom right . . .

'Is it my fault,' I ask reasonably, 'if places keep moving?'

With so little going for me, I have sometimes shown a flash of rebellion. Once I

contrived to forget my glasses. Another time the motorist behind was the cause of so much ranting that I thought *he* should be on the receiving end: as he passed us, I shouted from the window what we thought of him.

He pulled up, barring our way, overweight and clearly roused. My driver, irritated as much by my foolhardiness as by this unceremonious hold-up, was ready to tackle all-comers. Our challenger strode over, gave me a brief look as I sat, glasses askew, peering bleakly over my tattered map. Then he nodded understandingly, and returned to his car.

On another occasion, a particularly trying journey came to an impasse at a T-junction where a signpost standing before a hedge showed both left and right arms marked with the same town.

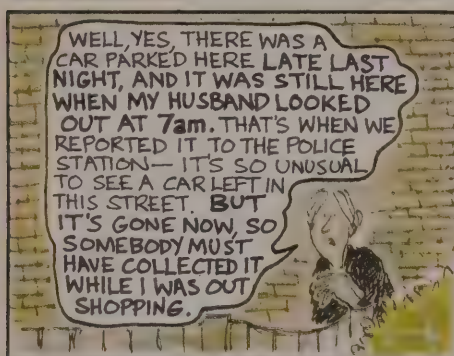
'Which way?' asked my driver.

'Straight on,' I replied.

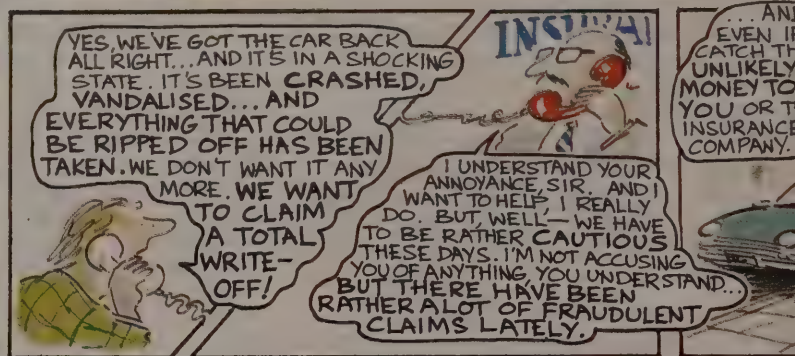
CYNTHIA WOODWARD

Roy Hahner





FOR NEARLY TWO YEARS NOW, POLICE IN LONDON AND MANY OTHER CITIES SIMPLY HAVE NOT HAD THE MANPOWER TO TAKE INTO 'CUSTODY' STOLEN VEHICLES THAT HAVE ONCE AGAIN BEEN FOUND



IMPossible? Highly unlikely? If that's your reaction to the tale of Alan and Ann, you could be in for a rude awakening. For the grim fact is that if your car is stolen today, the chances of recovering it intact are slim indeed.

As Alan and Ann discovered, many police forces, due to manpower shortages, no longer pick up abandoned stolen vehicles and take them to the safety of a car pound. Neither do they relay theft reports to insurers—the direct result of which has been to make many insurance companies treat all stolen-vehicle claims with suspicion.

All this against the belief that, in Britain today, one vehicle is driven away without permission every minute. And in London alone, 'auto-crime' (which includes thefts

from vehicles) accounts for almost a third of all indictable offences.

Three years ago, Sir Robert Mark, then commissioner of the Metropolitan police, warned that he simply did not have enough men to counter the rise in auto-crime in the capital, and that the onus for crime prevention had to fall on the owners of vehicles. Then, in December 1976, the Metropolitan police announced that it could no longer recover stolen cars found abandoned: they would have to stay in the streets until their owners collected them.

The final crunch came a year ago, when the Association of Chief Police Officers stated that, 'on the grounds of economic stringencies and shortage of manpower', the police could no longer continue to

furnish insurance companies with details of vehicle thefts reported to them...

Since then, talks have been held to bring some degree of order to the mounting chaos. Last May, a meeting between the British Insurance Association, the Home Office and ACPO led to the setting up of a working party charged with finding ways of easing the police's burden of paperwork.

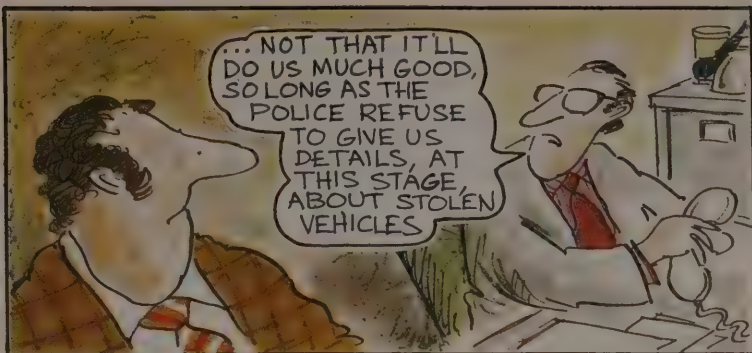
There is the suggestion that the police should send copies of car-theft entries in station 'incident' books direct to insurers; but administrative difficulties are involved, and the idea is unlikely to represent a satisfactory long-term solution.

In many areas, it is true, the police are now helping out by confirming details of car thefts; but only after insurance com-

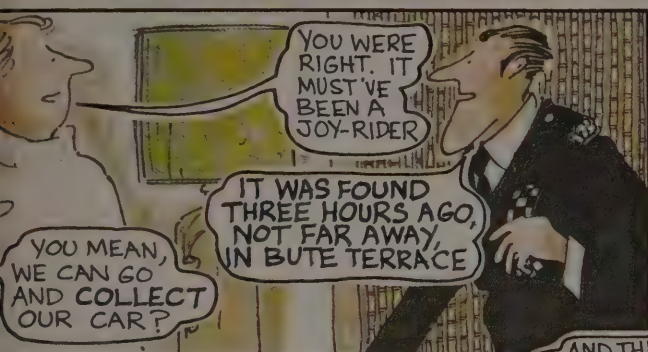
EXT MORNING...



YES, YES... BUT YOU'LL HAVE TO FILL IN A FORM FOR US. I PRESUME YOU'VE ALREADY NOTIFIED THE POLICE..?



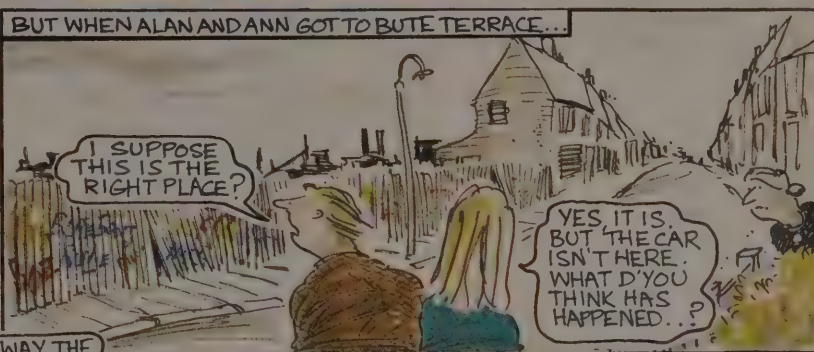
... NOT THAT IT'LL DO US MUCH GOOD, SO LONG AS THE POLICE REFUSE TO GIVE US DETAILS, AT THIS STAGE, ABOUT STOLEN VEHICLES



YOU WERE RIGHT. IT MUST'VE BEEN A JOY-RIDER

IT WAS FOUND THREE HOURS AGO, NOT FAR AWAY, IN BUTE TERRACE

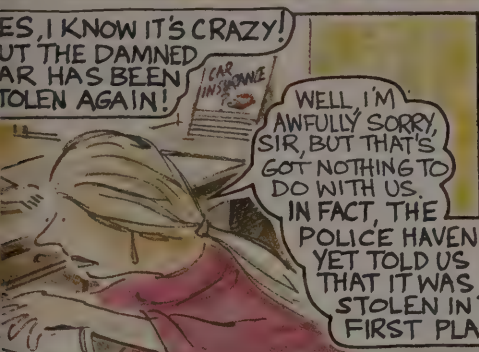
YOU MEAN, WE CAN GO AND COLLECT OUR CAR?



BUT WHEN ALAN AND ANN GOT TO BUTE TERRACE...

I SUPPOSE THIS IS THE RIGHT PLACE?

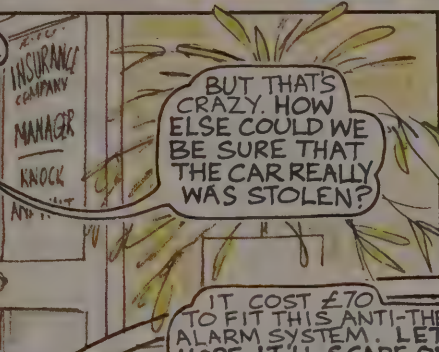
YES IT IS, BUT THE CAR ISN'T HERE. WHAT D'YOU THINK HAS HAPPENED...?



YES, I KNOW IT'S CRAZY! BUT THE DAMNED CAR HAS BEEN STOLEN AGAIN!

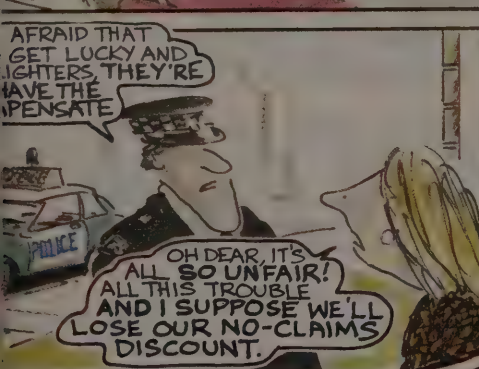
WELL I'M AWFULLY SORRY, SIR, BUT THAT'S GOT NOTHING TO DO WITH US. IN FACT, THE POLICE HAVEN'T YET TOLD US THAT IT WAS STOLEN IN THE FIRST PLACE...

...AND THE WAY THE SYSTEM HAS WORKED LATELY, WE WOULDN'T HEAR FROM THE POLICE UNTIL AFTER WE'D MET HIS CLAIM!



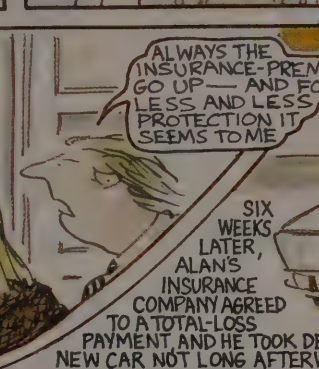
BUT THAT'S CRAZY. HOW ELSE COULD WE BE SURE THAT THE CAR REALLY WAS STOLEN?

THE SHORT ANSWER IS THAT THEY COULDN'T, BECAUSE IN 1978 THE POLICE STOPPED RETURNING THE FORM THAT GAVE INSURANCE COMPANIES DETAILS OF STOLEN VEHICLES



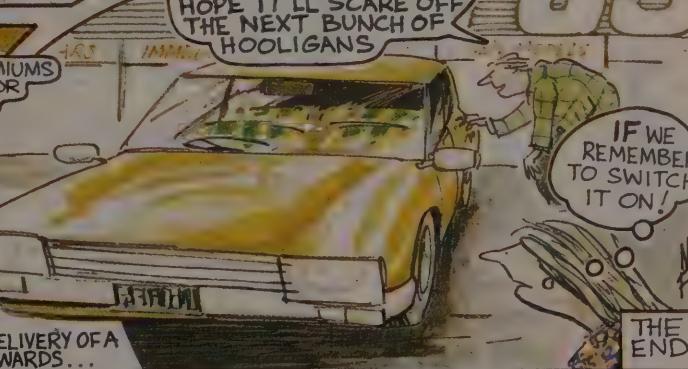
AFRAID THAT GET LUCKY AND NIGHTS, THEY'RE HAVE THE PENSATE

OH DEAR, IT'S ALL SO UNFAIR! ALL THIS TROUBLE AND I SUPPOSE WE'LL LOSE OUR NO-CLAIMS DISCOUNT.



ALWAYS THE INSURANCE-PREMIUMS GO UP — AND FOR LESS AND LESS PROTECTION IT SEEMS TO ME

SIX WEEKS LATER, ALAN'S INSURANCE COMPANY AGREED TO A TOTAL-LOSS PAYMENT, AND HE TOOK DELIVERY OF A NEW CAR NOT LONG AFTERWARDS...



IT COST £70 TO FIT THIS ANTI-THEFT ALARM SYSTEM. LET'S HOPE IT'LL SCARE OFF THE NEXT BUNCH OF HOOLIGANS

IF WE REMEMBER TO SWITCH IT ON!

THE END

panies have settled claims—a situation that still allows the unscrupulous plenty of scope for action.

The inevitable outcome is that motorists will soon be faced by higher insurance premiums.

The police are not supposed to reveal, over the telephone, the exact whereabouts of any abandoned stolen vehicle, as a safeguard against it being stolen twice. Its owner must go to the police station, identify himself and produce the vehicle's registration document before being told the car's location—a tedious business.

In fact, the police are often more helpful than the rules demand. For example, one motorcycle, stolen in Islington, N London, was dumped seven miles east at Wanstead,

where the police found it within four days. But, by that time, £175-worth of parts were missing, and when a local bobby saw its deteriorating condition he called a police van and took it into the safety of the station yard. 'Another two days, and there'd have been nothing left,' he says.

Other owners are not so lucky. A Ford Capri was discovered in an underground carpark after four weeks... but had been standing there for three of them, stripped of its wheels. In Tottenham, N London, a BLMC 1100 was stolen—and found—on three occasions. Each time the owner went to collect it, it had gone... not because it had been re-stolen, but because the thief was using it as everyday transport.

Vehicles are usually found because they 'look abandoned'. It's a fact that's noted

by spare-parts thieves as well as the police. Which is why in Birmingham they bring in all cars that have been stolen from outside the area, and which their owners will take some time to claim, and immobilise those stolen locally. In Bristol, they use a Belfry lock—a chain locking the car's steering to its clutch pedal—to keep them where they are, at least, until their owners arrive.

The decision of the police not to notify insurance companies officially of thefts applies throughout England, Wales and N Ireland (but not in Scotland, where insurers pay the police for the information). And the howl of protest that arose from the insurance world at news of it surprised police chiefs.

Vic Howden, deputy claims manager of

Milestone motor policies at Lloyd's, explains: 'A year ago, an insurance company would write to the police after it had received a claim, requesting details furnished to them at the time. The police would reply on a standard form, reporting vehicle and contents, and informing the company if subsequently it had been recovered. On 1 February 1978 the police stopped returning the forms, and refused even to confirm that a car theft had been reported.'

Insurance companies are always vulnerable to fraudulent claims, and have regarded their traditional close contact with the police as some sort of an elementary safeguard. With that gone, Howden confirms that crooks are given an easy time; owners of rusty old heaps are tempted to try to claim their good-condition market price; expensive accessories suddenly get added on claims forms; valuable personal items seem increasingly to go missing.

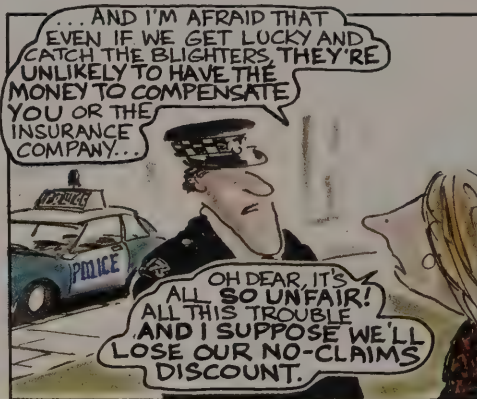
General Accident tells DRIVE that there are now also many cases where owners with only third-party, fire and theft policies report their vehicles stolen after having had an accident . . . and claim the cost of the accident-damage repairs, saying that it has been caused by the thief.

'Unless there is definite proof, we simply have to pick up the bill,' says a spokesman. 'It's almost impossible to estimate the number of fraudulent claims—and there are so many "perfect crimes" that any estimate is bound to be inaccurate. There's also a limit to the time that can

be spent investigating any one case . . .'

Eagle Star says: 'We used to be very close to the police, but now all the hard-won cooperation is being jeopardised. The police's high vehicle-recovery rate is going down, and society and the insurance companies are paying for it.'

Roy Russell, Midlands regional organiser of the BIA, agrees that the insurance industry's job is made virtually impossible without police cooperation. Yet the police attitude appears to be unequivocal. Claiming that officers used to spend 'an



incredible amount of time filling in forms for insurers', Tony Judge, press officer of the Police Federation, charges: 'The companies have had a wholly disproportionate use of police manpower for too long.' And Brian Morrissey, ACPO general secretary, describes the task as 'wholly unproductive'.

The row escalated when the matter was

raised in parliament last year by Robert McCrindle, Conservative MP for Brentwood and Ongar, in written questions to the Home Secretary, and eventually the police relented with a promise to investigate reports from companies that believed fraudulent claims were being made. But this was poor consolation to the insurers, effectively putting them in the position of being their own police force, obliged to employ armies of investigators at policyholders' expense.

Alan Teale, secretary of the British Insurance Brokers Association, acknowledges that insurers have sometimes been at fault. 'Some write 10 pages asking for information, others can contain their request in two sentences,' he says. 'We want to try to get a system that is economical to run and which avoids unnecessary duplication.'

'We are strong supporters of the police—we want to stress that—and we know they have a major manpower problem. They need help, and that is what we are setting out to give them.'

Although the Home Office may be able to resolve the impasse, insurers are gloomy about prospects for containing premiums. 'After a year of uncertainty, premiums may well rise because of increased and possibly unestablished claims,' says Howden. And General Accident, summing up the bitterness of the insurance companies, comments: 'We've been treated by an unscrupulous section of the public simply as an extension of the welfare state . . .'

PETER DALE



MY KIND OF PLACE

Small is beautiful

THERE WAS a day when famous and wonderful restaurants were not quite so far beyond the pockets of many of us—I used to be a restaurateur myself, and so had a good excuse for visiting them occasionally. But that day is long gone, and now I look for the little places, tucked away in sidestreets and worked by one or two people, where the food is interesting and reasonably priced.

My 1979 kind of place wastes not, and recognises the demise of *haute cuisine*. It's small, simple, clean and honest. If it must be trendy to attract customers—well, I'll understand so long as the trendiness stops at the kitchen door. And, after sundown, it must

be a place for adults, not children.

By 'honest', I don't so much mean that the place mustn't cheat on change (that goes without saying) nor fail to make its pricing structure clear (though it won't) as take no short cuts that diminish cooking quality. Classic dishes must be faithfully reproduced—not as at one place, not a million miles from my Cardiff home, where *crème brûlée* turns up as a solid custard, topped with a sickly mound of whipped cream.

For years, British catering suffered, it was said, from lack of trained staff. Then came the great waves of Spanish and Italian domestics to show just how little training mattered if the aptitude were there. Now, at last, we have training schemes and schools . . . yet the AA still finds that many of the best places are run by amateurs. Could it be that a little training is a bad thing? And a lot of training even worse?

Recently, a friend and I dined out in Pembrokeshire. With some difficulty we got past the legs, beer and loud music in the bar to reach the empty restaurant . . . from where we were sent packing back to the bar by a hostile waitress. Another, who knew nothing of the menu, came to take our orders as we sat, cold and uncom-

fortable, on a bench where people tended to kick us as they passed.

After some 40 minutes we were required to re-negotiate the hazards back to the restaurant, where packaged smiles came out to greet us at a minuscule table in the centre of the room. Definitely NOT my kind of place, even on a wet night in Pembrokeshire.

Still, there *are* times when I feel reassuringly at home . . . as when a restaurant door opens to a warm smell of herbs and wine and garlic and real coffee. A kitchen producing smells like these surely cannot disappoint at the table.

There'll be a smiling welcome, too, and someone to take my coat, and plenty of time to choose from the menu. Three or four starters, half a dozen main courses and four or five puddings are enough. And whoever takes my order will know how the dishes have been cooked, and be eager to tell.

My kind of place will make mistakes, learn from them and not charge for them (it's the cooks who drop culinary clangers and don't know or care who make me despair). And, of course, the proprietors of my kind of place will be *personalities*—people I'll want to meet and thank.

BOBBY FREEMAN

And these are the places that AA chief hotels inspector Geoffrey Lerway recommends for your living-in and eating-out delight.

Durrant House Hotel

Bideford, Devon (tel 023 72 2361) With bedrooms in a modern extension to the original Georgian house, this privately owned hotel is well and comfortably furnished, and has a heated, outdoor swimming pool and a pleasant garden. The restaurant has dancing five nights a week to live music, but its popularity is due to its better-than-average, good-value food and service. Double b&b, £18; dinner for two with wine, £12.

The Lowman Restaurant

45 Gold St, Tiverton, Devon (tel 088 42 57311) In a simply-decorated Queen Anne building by the River Lowman, near the town centre, Tim Harvey and his wife Susan concentrate on providing good, unpretentious food, decently cooked. The restaurant is run for the benefit of the customer, with lunchtime quick-service dishes as well as a more restricted menu. The wine list is interesting and starts from £2. Lunch for two, from £15; dinner including wine, about £12.

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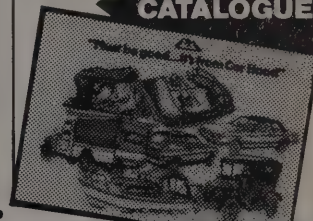
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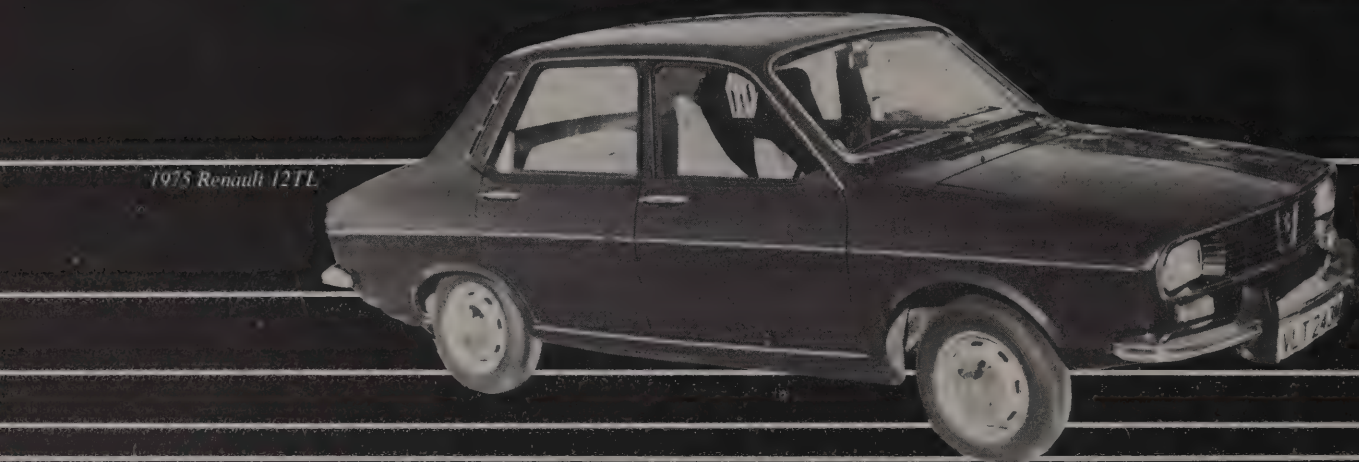
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1972 BMW 2002



1976 Austin Allegro 1300



1975 Renault 12TL

What can you buy for **Three wise**

GIVEN A BUDGET of £1500 to find a reasonable secondhand car, what are your chances of success? DRIVE found the sobering truth by turning five readers loose with an imaginary bundle of fivers and instructing them to try and pick a winner. We then sent AA engineers to adjudicate...

Perhaps our prize should go to Dave Purnell, of Cheltenham, who went looking for comfort and settled for a Triumph Dolomite—the only car he liked that was within the budget—for he was the only one of our readers not to buy a one-time hospital case: *all* the others had accident damage that had been repaired with varying degrees of skill.

Susan Gratton, of Birmingham, faced a demand for a hefty deposit before an AA inspection would be allowed...

Mary Raynor, from Hackney, London, heard about a classy BMW 2002 that had been a shopping car for a wealthy wife—well, that was the dealer's story...

Robert Hadgraft, of Felixstowe, tried to buy British, before ending his search with a passable Renault 12TL; while Rosalind Canon, of Woodley, Reading, selected a battered Morris Marina Super, swayed by the simple fact that it had four doors...

Overall, our punters won a 'could do

better' comment from the AA's experts—but two worthwhile cars out of five does suggest that the odds against finding a bargain in the grand-and-a-half used-car market are rather on the long side.

Speed-merchant Robert's staid wing-dinger

Robert Hadgraft, a 22-year-old Felixstowe reporter, owns a 1971 Hillman Avenger that is both reliable and economical. But its 1248cc engine lacks the punch that Robert would like to speed his tours of Suffolk.

So his first choice was a 1974 Triumph Toledo 1500, with 40,000 miles on the clock, at £1495. 'The model has always appealed to me,' said Robert, 'and this one seemed to be in good condition. I thought it would be economical and speedy, and it was certainly good-looking.'

'The salesman kept emphasising that it might be sold by the time the AA arrived to inspect it, but he was happy to have the experts go over it. He did suggest a holding deposit, subject to a satisfactory AA report, but I told him I'd risk the wait...'

Sadly for Robert, the salesman's warning came true, for when the inspector arrived, only two days later, the car had been sold. He renewed the search and,

despite his determination to avoid foreigners, found his eye taken by a P-registered Renault 12TL.

'It was the only car in a Colchester garage that was in my price range—a metallic-grey 1975 model, with 37,000 miles recorded, for £1590. I've never been particularly impressed by the Renault 12, but this one looked well cared-for, and the dealer happily agreed to an inspection.'

Second opinion

Perhaps more by luck than judgement, Robert Hadgraft had tracked down an acceptable car at a fair price. A few minor items required attention—but three of them directly affected safety and reliability and could not be left unrectified: the release valve on the radiator's header tank had disintegrated; the fanbelt was badly cut; and the car needed two new tyres.

The Renault had apparently been crashed in its short life—there was a visible colour difference on the nearside front wing—leaving the bonnet catching on both wings' water channels. The bumpers lacked their chrome on the top outer surface 'for some obscure reason', and rust was making a home in the front valance. Apart from slight oil seepage and excessive choke movement, however, the



1975 Morris Marina 1.3 Super



1973 Triumph Dolomite



monkeys...?

Five DRIVE readers comb the showrooms and small-ad columns to find what's on sale for £1500—or three 'monkeys'

engine appeared to have survived unscathed, doing well in the brief road test.

Uneven wear of the Michelin radial-ply tyres could have fooled the inexpert into paying for a geometry check, but our engineer had another theory: 'The bald outer edge of the nearside rear and spare tyres could have been caused merely by the previous owner's fast cornering technique. But, apart from the loss of rubber, the enthusiastic driving has done no harm.' Unless it caused that crash...

An underbody inspection produced a clean bill of health—the forward exhaust pipe and silencer were almost new—but a methodical check of ancillary equipment showed that Robert would have had some winter-motoring problems, for the heater's blower didn't work.

In all, the 1300cc Renault may not have been the road-burner he wished for, but Robert had managed to pick a roadworthy model that didn't demand expensive repairs. And, in the economy end of the used-car business, that's good going.

Something simple, something sad for Rosalind

Medical secretary Rosalind Canon, 24, from Woodley, Reading, set out armed with a used-car price guide to find 'some-

thing simple' that her husband, a DIY-fan, could maintain easily. Being less than 5ft tall, Rosalind's other priorities were a car that she could park without too much wheel-wrestling, and four doors.

The model that possessed all these virtues for Rosalind's money was a 1975 Morris Marina 1.3 Super, with 44,000 miles on the clock and a price-tag of £1589.

'It looked very clean,' she recalled, 'and, being a Super, it had all the little extras that look nice and don't really put that much on the secondhand price.'

'The garage offered me a 12,000-mile or 12-month guarantee, which boosted my confidence and made me think that at least we'd have some sort of comeback if anything went seriously wrong.'

'The mileage was above average, though, and my husband preferred my second choice—a 1975 Vauxhall Viva at £1489 that had done 30,000 miles. But I decided to stick to my guns because the Viva had only two doors and didn't look as smart as the Marina.'

'I did look at a 1975 Renault 6TL—I liked its tailgate and folding back seat—but it had already done 49,000 miles and I thought £1475 was too much to pay, particularly with only a three-month guarantee. A Mazda 818 at £1595 looked

sporty and had four doors, but I hadn't heard anything about Mazdas—good or bad—and that put me off.'

Second opinion

Ignore the accident repairs required, and this could be a car worth owning—that was our engineer's verdict. But, unlike Robert Hadgraft's Renault, the nearside rear wing and boot had been poorly repaired (they were still dented), and the body had other areas of minor damage, scratches and rust blisters in character with a Marina of this age. The bonnet badge was missing—stolen, the garage suspected, from its open car lot.

To compensate, the garage had carried out its usual pre-sale checks thoroughly: the clean engine compartment was impressive, and the battery nearly new. Some money would have to be spent on tyres, though, as the offside front Michelin radial was worn unevenly, and the others required replacement in the near future. Underneath, factory rust protection had been applied and was seen to be doing its job—thanks to the dealer's removal of accumulated road dirt.

Exhaust pipe, clutch, gearbox, brakes and transmission were all cleared—in fact this last was unusually oiltight—and the

only annoyance among the ancillaries was a broken hazard flasher.

In the road test, our engineer pushed the Marina up to 60mph and noted that the car not only behaved as it should, but was also rather quiet for its age and mileage.

So Rosalind's choice seemed to have a healthy life ahead, and her husband would appreciate its tried, trusted and clean engine . . . but its battered body could make it an expensive long-term prospect.

Mary, the status symbol and the old wife's tale

Mary Raynor, a 31-year-old dermatologist from Hackney, London, admits she is the world's most negligent car owner: 'I only have my five-year-old Peugeot 304 estate serviced when it breaks down. I suppose it's because I've been unnerved by the size of the bills I get whenever the garage looks at it. It's been reliable, and stood up to a lot of punishment . . . but, oh boy, when it goes wrong, it *costs*.

'It was during one of its bad days that I heard about this K-registered BMW 2002. Normally, I wouldn't have taken much notice, but I had visions of me in this silver-grey status symbol. The £1200 asking price meant that I would have had to add very little cash in a swap for my car.

'Chiefly, I sat up and took notice because I was told that it had been a second car in a well-heeled household—the first being a chauffeur-driven Rolls-Royce—and that it had been used by the wife for shopping. The biggest bonus was that it had just had a £900 engine rebuild: apparently the

owner had ordered another BMW and, while waiting for delivery, had blown up the engine of this one. Obviously it had to be fixed before it could be sold.

'Providing the bodywork was OK, I thought, the new engine should double the car's life. I thought I couldn't go wrong, and sat back smugly to wait for the AA to back up my judgement.'

Second opinion

With 73,497 miles on the clock, DRIVE had to conclude that the 1971 BMW's wealthy lady driver lived a long way from the shops . . . While the faults found were typical for a vehicle of this age, some items did need prompt attention—and that was going to be expensive on this exotic German. In fact our engineer noted 10 repairs as 'essential' and 14 more as 'desirable'.

First problem was a hard-to-unlock driver's door. The boot was clearly letting in water, and its lid was scratched and peeling. The passenger's seatbelt was damaged and out of action.

Visible body damage was confined to minor dents, but there was evidence that several panels had undergone repair and been resprayed. Several panels also showed blisters under the paint.

Our inspector had to add three pints of oil to the engine before taking the BMW on the road, and, although there was evidence of the '£900 overhaul', blue smoke from the exhaust may have been a clue as to where the oil was going . . .

Signs of less-than-perfect maintenance

abounded: bolts were missing on the clutch's bell housing, the starter motor's bracket and the flywheel guard; the air-cleaner's warm-air intake trunking was missing; and disconnected breather pipes were the probable cause of the car's erratic idling.

Uneven tyre wear meant a steering check, and slight free play in the steering was also noted. Underbody, the exhaust pipe was rusted and full of holes.

On the road, the engineer kept the 'new' engine's speed down to 50mph—but it was enough to let him diagnose worn synchromesh in second and third gears, a problem caused by old age and soon likely to need expensive repair.

Disc brake pads were worn out, there was excessive travel on the handbrake, and our expert wisely decided to limit his road test to 10 miles when he noted wheel wobble at 30–50mph.

Chastened by this alarming list, Mary Raynor was glad that she didn't actually have to buy her BMW 'snip'.

Dave's 'faultless' Dolly daydream

There was only one car that Cheltenham technical author Dave Purnell, 53, could seriously consider buying with 'his' £1500—a 1973 Triumph Dolomite at £1450, with 47,000 miles recorded.

'Everything else that took my fancy was over £2000,' said Dave, 'and all I really wanted was a comfortable family saloon that looked good. The Dolomite was well

continued on page 62

SECONDHAND REVIEW SPOT CHECKS

Renault

The 12's generally rust-resistant body has one or two corrosion-prone areas: along the sill spot-welds, bottoms of the doors, under-door drainage slots (remove trim panels to check) and along all brightwork. Check, too, that stone chipping has not caused rusting behind the rear wheels.

Underbody sealant tends to be patchy, especially on M-registered models, but the metal usually remains sound. Make sure that the door-sealing rubbers are not chafed or split.

Facia, glovebox-lid and steering-column-shroud rattles are quite common. Ensure that the door locks work, and test the front seats for rigidity.

The engine is usually very oil-tight, so be suspicious of an oily one. Slight seepages are likely from the oil filler cap (its spring clip may be faulty), and there may be a weep from the oil filter canister seal. Check that the crankcase breather T-piece is not cracked or broken. Expect characteristic vibrations at 45–50 mph in top gear; other tremors could be worn engine mountings.

The gearbox will chatter softly in neutral, and the clutch release bearing is likely to emit a low zizz when the pedal is operated.

These are normal if not excessively loud. Clutch action should be smooth, and there should be $\frac{1}{2}$ in free play at the operating lever under the bonnet. Driveshaft knocks (audible on full-lock turns and on/off jerks on the accelerator in the lower gears) mean worn couplings—pricey.

Rock the wheels to assess bearing play; there should be little movement. There should be no detectable free play at the steering wheel, either, and the steering gaiters must be free from splits. Examine brake pipes for corrosion, particularly at the rear, and make sure that the flexible hoses are neither cracked nor chafed.

Check that the ignition warning light operates correctly, as alternator rectifiers have been known to fail on M- and N-registered models. Check that the dip and indicator switches operate correctly. The wipers are normally noisy in operation.

Morris

Rot sets in on the Marina at the top rear of the front wings, over the headlamps and in the stone-blasted areas under the front bumper and behind the rear wheels. Look for corrosion around brightwork on wheel-arches, window sills and door

handles; make sure that the jacking points and suspension mounts are sound; check that leaking seals have not let water into the boot—lift the mat to investigate; and inspect for dampness under the front carpets.

The engine should start promptly, warm up quickly and idle reliably. Expect some tappet noise (usually corrected by adjustment) and timing-chain rattle (acceptable if not excessive). Inspect exhaust system for corrosion and leaks; but it's cheap and easy to replace.

Some baulking into first gear is quite normal, as is slight gear whine in second and third. The rear axle may whine on light throttle; provided this is subdued, it's not serious. Listen, too, for whirrs or screeches from clutch-release bearing. Check synchromesh, especially on second and third gears, with fast up- and down-changes. Look for oil leaks at the gearbox tail-shaft.

Watch for a drooping front end (the torsion bars could be weak) or a down-at-heel stance (rear-spring leaves may be cracked). Leaf springs on pre-1973 models are liable to twitter when dry; anti-squeak buttons were fitted later. Check that the steering rack is secure and free from leaks,

and that the rubber gaiters are undamaged. Test the dampers—the car should settle after one up-and-down bounce at each wing—and rock the front wheels, top and bottom, to assess bearing play. (Marina bearings have a certain amount of play built-in. If in doubt, have them checked.)

Squeal, grab and rapid brake-dust accumulation are common on early examples. If these symptoms are present, different linings are required. The alloy master cylinder's mounting often corrodes—inspect it closely for cracks. The handbrake should be fully on in four clicks; stiffness may be due to lack of grease on cables and lever pivots.

Check the rear lights to ensure they operate correctly—water can seep into the lamp clusters.

BMW

There are no *particularly* bad areas on the 2002's body to check for rust, so routine investigations should be sufficient. But it's worth taking a look at the condition of the underbody sealant on older models. Also ensure that no corrosion is present along brightwork strips, and that the front sill below the radiator grille is not badly chipped or stone-pitted.

Top-end engine noise may be



INSURANCE

The longest hangover

COMPANY director Jeffrey Aynsworth knew the risk he was running when he downed his eighth large scotch at his firm's New Year's Eve dance, then climbed into his Daimler Sovereign for the journey home. After all, he'd been through it all five years earlier.

Then, a £100 fine, and 12 months' disqualification for being drunk in charge of his vehicle, had been tough on the 46-year-old former soldier, but not disastrously so: he could afford to put a chauffeur on his firm's payroll to drive him around.

Of course, he had had to sweet-talk his insurance company into allowing him comprehensive cover again, once he'd got back his licence, and he'd had to accept a 50% loading on the premium. But five years is a long time, and, on New Year's Eve, he hardly noticed that he was cutting a

roundabout too fine . . . until he ended up around a lamp-post, nearly scything his car in half.

In due course, justice was dispensed to fit the crime. Not that Aynsworth was really surprised by the £1000 fine, nor even the three-year driving ban. What really shook him was the awesome warning the insurance company gave him.

'I'm afraid your problems are only just beginning, old boy,' said the manager. 'We'll never again give you comprehensive cover, but, since you've been with us for so long, I might just squeeze out a third-party policy for you—and that'll cost you dear. If you ever want comprehensive cover again, you'll have to go to one of the people who specialise in that side of the business: it's what we call the "sub-standard risk" market.'

'So I'm going to be treated like a leper, am I?' asked Aynsworth tetchily. 'Haven't I been punished enough already?'

The brutal truth is that insurance companies, for practical, commercial reasons, punish the persistent drink-drive offender long after he has paid the legal penalty—sometimes for the rest of his motoring life. 'It all depends on the circumstances of the offence,' says Mike Saunders, the AA's motor insurance manager—'how much he was over the limit, the size of his fine, whether he was caught after an accident or because of a technical offence . . .

even his personal standing with the company is considered.

'Generally speaking, a first offender, who may have been caught because of, say, a lighting infringement, and who was only just over the blood/alcohol limit, may redeem himself with his insurers within a few years. But if he knocked someone down when he was well over the top, he'd better not do it again . . .'

Theoretically, an insurance company is not legally obliged to offer even third-party cover to a bad risk. 'For instance,' says Saunders, 'a third-time drunk-in-charge may be unable ever to find an insurance company willing to take him on at any price. Fortunately, 95% of the culprits remain first-timers.'

'The only way that a "regular" could ever drive again would be to take advantage of a bizarre provision in the Road Traffic Act 1972 that allows a motorist to by-pass the legal insurance requirements by depositing £15,000 with the accountant general of the Supreme Court.'

This 'exception from the requirement of third-party insurance', as section 144 of the Act is called, has existed since the early 1930s, and, on present values, is priced absurdly low. Even so, it's used principally by organisations that can afford to deposit that sum and meet any claim from their own financial resources.

Among such organisations is the GPO: its fleet has more than

46,000 telecommunications vehicles, 25,000 post office vans and 6000 trailers—all covered by one single payment of £15,000.

Says Saunders: 'If a private motorist were to deposit £15,000, the money, suitably invested, would be returned to him with profits either when he stopped being a car owner or could furnish proof that he had taken out insurance elsewhere. But with courts awarding astronomical sums for personal-accident damages, the motorist who can afford to pay over and above the deposit must be rare indeed.'

'I suppose the arrangement was adequate in the 1930s, but it's not surprising that the government is now being urged to increase the amount or accept the findings of the Pearson Committee on compensation, which, in its report last year, recommended that the provision should be abolished altogether.'

But even if section 144 remains untouched, Jeffrey Aynsworth is unlikely to make use of this last resort when his driving ban is lifted in two years' time. Having already sold his car, he is now cycling to the office every day . . . and has become a teetotaler.

More moans, groans and motoring tales in DRIVE's question-and-answer Clinic column on page 28. If you have a query, send it to Clinic, AA, Fanum House, Hampshire—we'll try to sort out the goodies from the baddies.

caused by excessive valve clearances: if it cannot be cured by adjustment, it will mean that the rocker assemblies are worn. A worn, high-mileage example is likely to display exhaust smoke.

Check for this on acceleration and overrun, also see that the engine is clean and oil-tight. Ensure that there is no play in the water pump and that it is silent. Examine the exhaust system for corrosion, damage and gas leaks.

Test synchromesh for correct operation and ensure that there is no clutch slip. Gentle 'abuse' of the accelerator should show up worn universal joints (knocks) and worn splines (clicks) at the wheel-hub end of the drive-shafts. Listen, too, for whines and clonks from the differential.

Expect the steering to be relatively heavy, and be prepared for a certain amount of bump-thump from the radial-ply tyres. MacPherson-strut front suspension makes the 2002 sensitive to wheel imbalance, which causes shimmy. If the steering-box gear meshing is set too tightly, it can cause premature wear; if too slack, it will exaggerate any steering shake. Check for wear in the steering linkage and suspension joints, and bounce test dampers.

Examine the brake pipelines for

corrosion and, if possible, check pads and linings for wear; the rear drums are easy to remove.

Triumph

On the Dolomite, checks should be made for water leaks past the boot seal—look for dampness under the mat. Examine the front wings and sills for corrosion; look along trim strips for lurking rust; and generally inspect paintwork for neglected stone chips.

Beware of an engine emitting excessive blue smoke haze when revved hard. Ensure that the throttle linkage works smoothly and progressively. Check fanbelt for wear and correct tension. Examine the exhaust system thoroughly, particularly at the rear where it can crack.

Listen for wear in propshaft universal joints: clonks will be heard with jerky on/off accelerator action. If these are faulty, it means a complete new shaft. First-gear baulking is to be expected, and second-gear synchromesh is likely to be worn—test with fast down-changes. Ensure clutch slip is not present.

Faulty front-wheel alignment will often be shown by uneven tyre wear, but a full steering geometry check is a surer guide.

See that the brake-fluid reservoir

is topped-up and that the fluid is clean, and check brake pedal and handbrake for excessive travel. Ensure that the alternator is working correctly: diode failure was, at one time, fairly common. A low-charge ammeter reading is one clue that should be followed-up with a circuit tester.

Austin

Early Allegros were particularly prone to water leaks, so pay special attention to signs of this. Remove front carpets and boot floor covering to look for dampness. Also check for water ingress round the rear-three-quarter windows, front- and rear-screen rubbers and rear extractor vents. Also check the usual areas susceptible to rusting, including around stone guards, plastic mud baffles and rear subframe mounting points—reached by removing the rear seat squab.

If possible, test the car with the engine and gearbox cold. If first gear engages immediately, all is well; if it doesn't, the primary-gear teeth could be too sharp, and will cause grating when driving and make gear changing difficult. (Even so, expect the shift to be rather vague and rubbery.)

Lack of grease, or the presence of rust on the clutch-plate spigot,

will mean crunchy gear changes because the clutch plates are not clearing fully. Judder and slip may be the result of oil seeping past the mainshaft seal.

Noisy valve gear can usually be minimised by tappet adjustment. Cylinder head distortion can result from incorrect torque on its bolts. Check for signs of oil or coolant leakage, especially at the rear of the engine. Examine the header tank and the bottom of the radiator for coolant seepages; also inspect hoses for damage, particularly round their wire clips.

Inspect constant-velocity joint rubbers; oil leaks can cause them to swell, making the U-bolts knock against the gearbox: look for telltale signs of shiny metal on the casing.

Test for hub bearing wear by the usual wheel-rock method. Inspect the area where the drive shafts enter the gearbox: if oil leaks are present, new seals are required—a long and costly job.

If the car is sagging on its suspension, or not sitting squarely, one of the Hydragas suspension units is faulty. Replacement is another long and costly job. Ensure steering gaiters are not damaged, allowing dirt to enter.

Check the condition of all flexible hoses and hydraulic pipes.

At £1000 a wheel, medium saloons can't afford to be . . . well, medium: buyers here look for a little more comfort and an extra bit of oomph to mark them out from fleet-car users. DRIVE takes off in a Honda Accord, Morris Marina 1700HL and Ford Escort 1.6 Ghia—three high-aiming family hacks

Honda Accord 4-door

Price £4115 On the road £4225



HAPPY ENDING TO AN ORIENTAL TAIL?

Asked to point to the most significant motoring trends of the 1970s, we'd have to include the sudden popularity of Japanese cars—their sharp, good looks, lots of extras and reliability were, it seems, just what the British car-buyer wanted.

Mind you, most have been a bit boring—unadventurous and outdated mechanically, and with indifferent accommodation and little driver-appeal.

Then came the Accord . . .

With a specification as up-to-the-minute as a Volkswagen's or an Alfasud's, the chunky Honda hatchback made a big impression on us in our 1977 road test. Now the Oriental adventurer has gone and 'done a Derby': just as VW has added a boot to its Polo, so Honda has turned the Accord into a saloon—and with four doors, too. And to think, it all started with motorbikes . . .

How it goes

The 1979 revisions to the Accord go more than just skin-deep, with contact-less electronic ignition, new gearing and engine changes that keep the capacity at 1602cc but give the pistons a wider bore and shorter stroke.

It does seem as if the mechanical revisions have slowed down the Accord a bit. Both the British cars in this group are livelier.

The gear shift is positive by front-wheel-drive standards, but new drivers may find that the very deliberate move between fourth and top takes some getting used to. The soft clutch and smooth accelerator action, however, make a smooth operator of any driver.

Honda has led the field in the US with complex, ultra-lean-running, low-emission engines, so it's not surprising that it can turn out satisfactory power units for the less emission-conscious UK market: this version runs a treat, with no carburettor hesitation or

warm-up hassles. Its biggest unsolved problem is a buzzy harshness at 3500–5000rpm that spoils its otherwise-dignified progress at speeds beyond the British legal limit, and rapid overtaking tends to be a noisy and furious affair. Happily, the five-speed gearbox does a lot to side-step the issue; and low-speed flexibility, by contrast, is excellent even in that tall top gear, with the Accord pulling smoothly from low 20s.

Fair amounts of wind and road noise are apparent at times, and the test car's glovebox rattled intermittently. A more ominous sound was the creak that came from the rear on occasions—rear dampers were a source of anguish on early models . . .

Where the Accord's power unit really scores, though, is in economy. In fact, we know few other 1600s that are as abstemious. The Escort's 4-star 33½mpg is good; but the Honda's 35mpg on 2-star is fantastic.

A superb tank range is as much due to a reliable low-level warning light and accurate gauge as to the sensible tank capacity, with easy filling almost to the brim. Oil consumption during our test period came out at 3000 miles to the pint—three times better than in our previous Accord.

It's the way the car moves and handles, however, that sets it apart from the average Japanese offering: a softly sprung, comfortable car that is a pleasure to hustle through corners. It seems impossible to ruffle its poise, and the sensitive, alert steering moved one DRIVE tester to declare that it was as good a system as he had ever encountered.

Cornering behaviour is as safe as you could wish for. The steering wheel almost shouts at the driver if the front tyres are beginning to skid, and, if the front end starts to run wide, things can be stabilised by cutting the accelerator.

The brakes, unfortunately, don't do quite as well, with fade during our standard stops-from-60mph tests causing an alarming rise in pedal pressures . . . amid palls of smoke. Happily, they cool quickly, but long mountain descents could create problems. Perhaps to compensate for this, servo assistance is too eager.

Inside story

Some may argue—Honda among them—that this £4100 Accord is really a Ford Cortina, Vauxhall



Flying starts

Cavalier rival, and that comparisons with the cheaper Morris Marina and Escort are misleading. But the Honda is 14½ft long only because of its bumper overhang; as with all saloons, the factor that really determines interior accommodation is wheelbase—and the Honda's is 1–2¼in less than the other two cars in this test, and 5–7in less than the Cavalier-Cortina.

Taking a tape measure to the interior proves the point. Rear-seat room is inferior to that of the Marina or the Escort, and rear-entry room is similarly restricted: the less-agile have to squeeze and shuffle to get between seat and centre door post. Once in, though, they find that the Honda's rear seat is comfortable for all but the very tall, with a centre armrest.

The tall driver has generous legroom, and, although some long-distance motorists may complain of backache, the driving seat

is not at all bad. Another complaint is that the seat adjusters tend to be too coarsely calibrated.

What the Accord may lack in space, however, it makes up for in thoughtful detail. Both rear passengers can doze against high-backed rests and use individual, illuminated ashtrays; they also have oddments-stowage nets on front-seat backs, and a centre rooflamp obeys their door courtesy switches. Best of all, their feet are kept snug by their own piped supply of warm air.

Although some people criticised the Accord's 'plasticky' look inside, all soon learned to appreciate its functional luxury. And it's a similar story up front: a good-quality radio (that would perform even better if it had a decent speaker location), and a tidy instrument layout that includes a collection of original driving aids, with telltale lights that warn of the need for tyre



John Perkins

rotation and oil-filter changes. A panel showing the car's silhouette to warn if doors or boot lid are unlatched, or a stoplamp fails, is a real family-car asset.

Other lights signal brake failure, low fuel, handbrake on and choke in use. (The choke is beautifully precise—you push it in a click at a time.) And there's a rearview mirror that dips accurately, rheostat instrument lighting that covers the heater slides and a digital-quartz clock that sits high for all to read on the screen rail.

As well as a normal key-opening latch on the boot, there's a remote-trigger lever down beside the driver, and, when he gets out and strolls around, he finds the boot interior already illuminated. It is lined with plastic on sides and base, with the jack and tools securely fastened in place.

The wheel is stowed beneath a flat but rather slippery floor, which makes load height some-

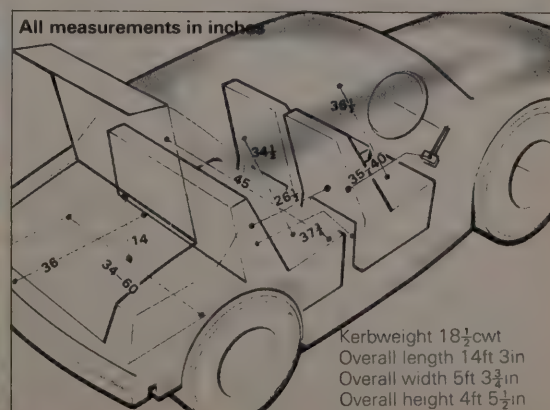
what shallow and could create upheaval if a flat tyre coincides with a full load. The high rear load sill also makes heavy cases a back-straining proposition.

The air-blending heater gives the driver an easy choice of temperature, but there are likely to be complaints from the other side of

the car where the breeze blows cooler, and it's essential to use at least the slowest fan speed at all times—otherwise, virtually nothing happens. The problem in winter, though, is misting up: the Accord appears to have no rear-extraction system, and the heated back screen needs to be on con-

stantly. Ventilation is powerful, all or nothing—fine in summer, draughty in winter.

Standard safety features include a rear foglamp, laminated windscreen and front head restraints (we like the handbook's advice about setting the pads to align with the tops of your ears!), and



the fuel-tank siting is well protected. Indicator repeaters are mounted on the front wings.

Seatbelts couldn't be more comfortable and stow unobtrusively; but interior padding is skimmed along the top screen rail. The bumpers meet US standards.

Living together

Japanese reliability is usually achieved by innate conservatism of design, but the Honda Accord is a very different box of tricks, and time alone will tell if it, too, will prove reliable. Nonetheless, all the encouraging signs of meticulous finish and fastidious attention to detail are in evidence.

General servicing accessibility is first-class: even oil and filter changes can be done from above. There are no distributor points to change, of course. Routine maintenance and bigger jobs are nevertheless time-consuming, and parts expensive. The thick handbook is useless as a DIY aid. Honda's sparse dealer network rubs salt in the wound. A few extra handtools are provided; the jack calls for too much grovelling to locate in its lifting points.

It is too early to assess depreciation on this year-old model, but we suspect that, initially, it may be heavier than on other Japanese models (if the Honda Civic's track-record is anything to go by). Like the sporting Escort, the Accord costs quite a bit more to insure than the Marina.

Our test car's metallic paint finish was thorough and glossy, with hemmed-over seams on door edges sealed with pvc strip to prevent rust blistering. Underneath, however, we found that the bituminous rustproofing had been applied patchily.

Mudflaps are fitted, but no other stone-chip protection is given to the sills, and there are mudtraps under the front wings. The waist mouldings keep road spray from straying up the body flanks, though.

Interior trim is easy to clean, and the floor carpets can be removed without too much trouble.

Verdict

The Accord is one of those rare cars that makes a bigger impression than a dispassionate balance-sheet of its pros and cons might suggest. Its accommodation and refinement are only good-average, and there are quicker, roomier cars at a similar price. Yet what could be dismissed as over-priced on paper begins to look like versatile good value when you've lived with it.

The Accord is thoroughly practical, yet somehow it manages to stir the adrenalin at the same time—and its typically Japanese good detailing is matched by brilliance in technical design. It represents a dramatic Oriental breakthrough . . . which is good or bad news, depending on your point of view.

Morris Marina 1700 HL

Price £3774 On the road £3894



ALL THE FRILLS, BUT TOO MANY FOIBLES

The British car buyer can be as cautious as a bank manager when it comes to laying his own money on the line. To the worriers, sophistication and high-technology are a recipe for expensive repair bills and a restricted choice of dealers when trouble strikes.

Recognise yourself? Then for you (and some of us, too), the latest Morris Marina, from BL, seems an almost ideal model of extreme orthodoxy: certainly, the body is the one we all know and trust—the one that isn't going to be any more out of fashion tomorrow than it is today. But in fact there's a new overhead-cam engine lurking under the bonnet . . . and, inside, the Marina is definitely having a fit of keeping up with the Jap-buying Joneses, with—in HL guise—goodies such as a radio and clock thrown in.

It certainly is much-improved. But can it really win more friends?

How it goes

DRIVE's test car was returned to BL just two days into our test programme because it was such a reluctant starter. The company's mechanics fitted a 'meatier' coil and ballast resistor, and, from then on, our Marina, unlike everyone else's, fired easily. Warm-up, however, remained slow, calling for a generous helping of choke to avoid the splutters, but once rolling the new 1700cc ohc engine rapidly won us over.

Unpleasant harshness at high revs and nasty, 70mph body-boom was more than balanced by the engine's flexibility: compared to the old push-rod 1.8 litre engine, the newcomer is smoother, freer revving, and develops 66hp more power.

Unless it is driven with restraint, though, the new engine is not particularly economical, and we achieved an overall 29½mpg in the wintry weather of DRIVE's test period; 70mph on the motorway needs a gallon for every 26½ miles.

The impatient owner will also find the petrol tank very slow to fill.

No doubt a fifth gear would improve mpg, but it's nice to have the ability to accelerate briskly without needing to row the car along on the gear lever. Ignore the din, and the Marina takes just 14sec to reach 60mph, and will battle to a test-track top of 94mph.

The gear shift produced a mixed reaction among our testers: it's light enough and can be hurried, but just occasionally it *crunches* into first; its travel is also rather long, and finding reverse can need muscle at times. The clutch has a nice 'feel' and weight, but even on the nearly-new test car it struggled hard before allowing a 1-in-3 hill restart.

BL claims that the Marina's new, trendy front spoiler in black, corrosion-proof plastic will reduce drag, improve crosswind stability and stop any tendency for the car's nose to lift. It is also made in two halves—a repair cost-cutting measure.

Poor surfaces can give Marina occupants the jitters, with bumps heard as well as felt. The car copes better when it's hustled along, with the anti-roll bars front and back doing their job; but, overall, ride comfort is merely adequate.

Bumpy corners threaten to alter the car's direction when pressing on, and a lack of steering 'feel' around the straight-ahead position doesn't inspire too much confidence. Nonetheless, experiments on a test track that became more like a swimming pool proved the Marina to be a very safe-handling car indeed. In fact, we were surprised to find it much better in the steering department than the Ford Escort Ghia, if not the Honda Accord.

'British brakes are best' could be a slogan to which DRIVE would be happy to subscribe, and the Marina's are no exception. There's even progression up to the 95% best-stop for an ideal

70lb pedal weight; the system doesn't mind when life hots up; and it takes to water like a duck.

Inside story

With all the in-at-the-price goodies that BL now gives the Marina HL driver, he could be forgiven for thinking that he is in a . . . dare we say it, Japanese car.

It has taken a long, long time for the British to wake up to the fact that lots of cars are sold on showroom appeal alone, with the attraction of a refined ride and good handling beyond the comprehension of most. So it is nice to find a quality radio, head restraints, rev counter, clock and so on in the Marina, and its high-intensity foglamps and twin halogen driving lamps were a boon during the dirty weather of the test days. (Though, while full-beam is brilliant, dipped headlamps are only adequate.)

Front-door windows are now one-piece—no quarterlight is given—which, as well as tidying the Marina's appearance, makes for less wind noise and a clearer view of the restyled door mirror.

Testers began by complaining that the front seats lacked lumbar and thigh support—all felt as if they were sitting in a hole. Thankfully, though, first impressions can sometimes be misleading, and even 300 miles at the wheel didn't produce the anticipated aches and pains. More driver-legroom has been created by relocating the pedals 1½in farther forward, but long-legged drivers could use more legroom, and it really ought to be possible to rob extra inches from the rear passengers who have more than enough space to stretch out: *their* seat is comfortable for two adults, but a third has to sit on a sculptured ridge. Getting in and out through the wide doors couldn't be easier.

Wipers are now on the right-hand steering-column stalk, where the indicators were last year, and offer a choice of two speeds and an intermittent setting—but why on earth are the blades set up for lefthand drive? Surely this is taking export too seriously!

It's especially annoying for tall drivers, who have to peer round an unswept corner of the screen . . . unfortunates who will also be infuriated by steering-wheel spokes that hide a row of rocker switches and the heater controls. Instrument lighting has two intensity levels, but neither is brighter than a glow-worm's tail.

The Marina has always had a roomy boot, albeit with a high sill, but DRIVE's enthusiasm was dampened by the way in which the test car's let in water. Inside the car, there's plenty of room for oddments, with a rear parcels shelf, lockable glovebox and two door-mounted bins. (Though we frequently had to restrain pas-

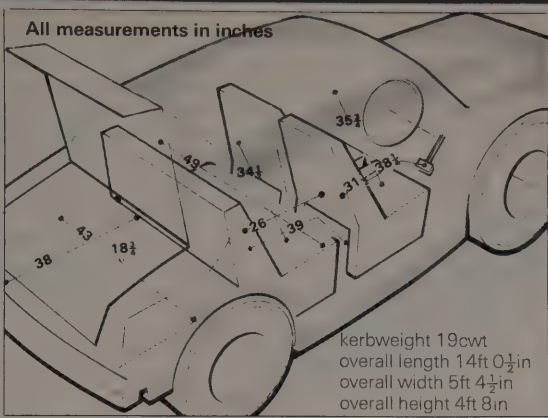
sengers from using the bins as door-pulls.)

Output from the Marina's heater is volcanic, but most of the warmth goes to the front-seat passenger, and the slider controls are very stiff to operate. Demisting is *not* particularly efficient, and the feeble breeze from the fascia's eyeball vents is needed to keep the side windows clear, thereby robbing the driver's face of fresh air.

The car now has dual-circuit brakes, improving the safety package, but BL still asks for more money if you want a laminated windscreen. Overall, though, the Marina scores well on our checklist, falling down only on the finishing touches. Visibility is good, apart from an 'invisible' sloping boot: take care when parking.

Living together

The test car that arrived at DRIVE was in a worrying mechanical state: oil was leaking from a damper, the differential pinion seal, gearbox and steering rack, and we had to repair a rattling exhaust pipe. There were also too many body defects—paint nibs and preparation marks on the bonnet, in particular—and, as well as that leaky boot, water was getting into the spotlamps, and



rust was finding a home under the aluminium trim.

Underneath, BL had made a good attempt at corrosion protection, but had let itself down by a failure to reseal previously-masked areas, such as the flanges round rear-spring anchorage points. The so-slow petrol filler also leaked petrol to the inside of the rear wing panel—which in turn was washed free of sealant.

Mechanically, there is nothing to worry the averagely-competent DIY man, but, judging by the toolkit supplied, he is expected to do no more than change a wheel—for which the scissors-jack locates easily in its points.

The Marina's priority has always

been easy service and repairs, and maintenance on this O-Series engine should be as undemanding as on its B-Series predecessor.

However, while sophisticated aids, such as an easy-change camshaft drive belt and plug-in thermostat are good for reducing garage times—and costs—home mechanics may find that the overhead-camshaft valve adjustment on the Marina is beyond them.

The interior is easy to clean, but dog owners will find the carpet reluctant to part with hairs.

Low parts costs have made the Marina popular with insurance companies—it's rated Group 3—and the secondhand buyer has a lot of choice.

Verdict

The Marina is undoubtedly a much better car, and we don't mean simply a much better engine: the interior, too, now has enough showroom appeal to tempt car buyers who normally look East. But if these prospective purchasers look farther than skin-deep, they will find some telling differences.

The Japanese have proved with their less-than-inspired products that conventional cars do sell—if they are well made. But 'quality' in this sector undoubtedly means 'total reliability', and our test car fell short of that ideal.

If only something could be done about it, BL would surely have no problems in selling another million.



TOO SOFT FOR THE SPORTING LIFE?

We remember testing a Ford Escort Mexico 1600 back in 1971, in those heady days when Ford had just won the London-Mexico World Cup Rally. 'Uncouth', we called it; but, despite this, we thought that the Mexico's big-engined efficiency and lack of temperament could make it an ideal proposition for all sorts of moderate, respectable people... if only it had the appropriate trimming and image.

Well, Ford must have been reading our backnumbers, for the Escort 1600 Ghia is it—all the poke of a Sport 1600, with two

more doors and the full set of luxuries that goes with the top Ghia label.

Has it been worth waiting for?

How it goes

With a 1599cc engine in Mexico tune offering a more-than-respectable 88bhp, this Escort Ghia is certainly no fop. The 'old' over-square, push-rod engine under its bonnet is, believe many, preferable to the overhead-cam unit that powers current Ford Capri and Cortina 1600s, and, kitted up with a Weber double-venturi carburettor and highly

efficient-looking manifold, it produces acceleration through the gears that is as good as anything in its class.

Top-gear pulling is not quite so impressive, partly because Ford has opted for an unusually-high final-drive ratio; but it does mean that maximum speed is achieved comfortably below the engine's peak power.

The high gearing also gives generous top speeds in the lower gears—36mph in first, for example—but the price paid is inability to get under way on a 1-in-3 hill, which could also mean problems for caravan-owners on lesser gradients.

As with nearly every Ford we have tested, the big-engined Escort is not only faster but more frugal than stablemates with fewer cc's and lower gearing: we averaged 33 1/4 mpg overall, as against 33 mpg on the 1300 model tested last year.

Marketing and pricing considerations apart, it would appear that, in an ideal world, all Escorts could do with the 1600 engine. It's also notable that this version doesn't need to use Ford's much-vaunted 'sonic idle' carburettor to save petrol; an automatic choke avoids undue wastefulness in the warm-up period, but allows the engine to stall in the few seconds after the first (prompt) start of the day. After that, it couldn't be more discreet.

The Ghia's sound-deadening kit

is perhaps its most impressive attribute, subduing impressively typical Escort engine-thrash at high revs. Sound insulation cannot hide the roughness of top-gear progress in the lower 20s, but the engine cruises sweetly at higher speeds, with just a hint of resonance around 60mph. More troublesome is high-speed wind noise from the front door frames, and a mild but irritating steering vibration that afflicts so many Fords with their strut-type front suspension.

The suspension, in fact, left us unconvinced. Escorts enjoy a deserved reputation for taut handling and precise steering, despite the firmish ride of an essentially unsophisticated system; but here these qualities seem to have been forsaken in an unsuccessful bid to make the car more bump-absorbing. Sheer roadholding seems better than ever, but the steering feels sloppier, and the car 'nibbles' and 'shrugs' over poor surfaces.

Escort brakes are well tuned and developed, in typical British-family-saloon fashion, with an excellent servo and no fade problems. The only thing to criticise is a rear-wheel tendency to skid when there is no weight in the rear of the car; no load-sensitive apportioning valve is fitted.

Similarly, it has become almost a formality to compliment a Ford on its excellent gear change, and this car's light clutch, too, was

less abrupt than formerly. Only fault was a lever that balked at first gear from rest occasionally.

Inside story

Despite Ford's convenient double-sided key—you don't have to get it 'the right way up'—the Escort's flush-fitting door handles and keyholes are hard to find and use in the dark. The floppy doors won't stay open on a hill, either, and passengers getting into the back find footspace limited.

Once inside, however, legroom all round is respectable—we disagree with critics who complain that the back seat is cramped. It looks cramped, with a cushion that extends well forward; but passengers generally are more comfortable than they expect to be—although headroom is limited and the backrest rather erect.

There's no centre armrest, though well-designed armrests-cum-steadies on the doors are useful to hang on to through fast corners. The seats' upholstery is pleasant to live with and responds well to a good brushing.

While there's little to criticise about the quality and good taste of the Ghia's trim, when you look closer at the car and its price, the level of its standard equipment is not as lavish as it at first appears: a radio, quartz clock, halogen headlamps and a remote-control door mirror are all very nice; but where is a decent radio-speaker location, rear-footwell heating or rear interior lights? Even rear seatbelts are an optional extra.

Front occupants fare better than rear passengers, but, even there, the seats' comfort doesn't match their inviting, plush appearance. The prominent roll across their tops makes taller people slouch uncomfortably, and they lack lumbar support.

The now-familiar Escort instrument cluster is good, but Ford doesn't seem able to get the right balance in speedo calibration: the latest dial has no 30, 50 or 70mph numerals—foolish, in view of current speed limits. The wipers have an intermittent setting, and electric washers are controlled by the same steering-column stalk; but the lights stalk, below it,

seems less than ideal in location and action, and minor switches clustered around the heater slides can be difficult to find.

The Escort's overall feeling of narrowness, its thickish screen pillars and its prominent screen rail (the Ghia's is covered in genuine wood veneer, we hasten to add) make its interior seem old-fashioned, but it does give its driver a good view forward. The rear view is impeded by a high window shelf, but reversing lights and a heated rear screen help.

Beneath that prominent rear shelf is a boot that's good for load height but lacks width, flanked as it is on either side by the fuel tank and the upright spare wheel, and has a rather-high load sill and a carpeted floor that isn't entirely flat. Inside the car, the rear shelf is too slippery to hold small items, and the roomy under-facia tray is lidded but not lockable.

Heating and ventilation is fine for those at the front, and the two-speed fan is seldom needed when on the move. The control slides are simple and clearly marked, and the air-blending gives temperatures to suit all tastes—immediately. Generous airflow from the screen demisters is always cooler than floor heat, thus avoiding stuffiness, which means that the facia's eyeball vents can be directed to clear door windows in winter.

Our checklist shows that, though Ford is fairly safety-conscious, some desirable features still come as 'extras', even on the Ghia—a rearward-facing foglamp, for example, adds £16 to the bill. We are uneasy about having the fuel tank in the boot; there's insufficient roof padding, especially along the top screen rail; and we would rather have a laminated windscreen than the tinted glass featured on the Ghia.

Living together

Ghia luxury does not affect Escort construction standards: look past the superior trim and finish, and it is once again obvious that Ford has yet to make a thorough commitment to effective rust protection on its vehicles. Actually all Escort Ghias are built in Ger-

many, and we must confess that their painting and preparation seems to be of a higher order than recent home-built Fiestas and Cortinas that we've seen; but little has been done to eliminate the mudtraps under the front wings, or to protect the sills from the shot-blasting they get from the wider wheels.

In spite of all this, the last two years have shown that the Escort Ghia model has held its value better than any comparable car. Of course, depreciation is greater than on cheaper Escorts, and the Ghia costs more to insure.

Part of the Ghia's success must be attributable to the undemanding, homely nature that lies beneath its glamour-puss make-up... although DIY-types will be nonplussed by the uselessness of its handbook, which is just about as much help as the sales brochure (and looks like one). The toolkit isn't much better, although the jack does locate easily and works positively.

Once under the bonnet, though, the home mechanic will find little to daunt him, even if components on the offside of the block, nestling closely to the wheelarch, can be difficult to reach. The tendency towards extended maintenance intervals is encouraged by sealed wheelbearings and self-adjusting brakes, with quick-inspection apertures provided.

Forecourt checks are facilitated by see-through containers, but there isn't one for the coolant, and we found the engine-oil dipstick sometimes difficult to locate in its flexible tube.

Verdict

Can you make a silk purse out of an Escort? For £3174, you can have a perfectly respectable 1.3 GL, and the extra £700 surely lifts the Ghia model into a class in which it is struggling. And the 1599cc power unit—which proves that engines don't have to be complicated to be efficient—is available in the no-nonsense Sport.

By contrast, the Ghia fails to keep its promises, proving that it takes more than softer springing, plusher trim and a fancy price to give a car the manners of an aristocrat.

HONDA ACCORD 4-dr

Front engine: 1602cc/4cyl, OHC (belt); one double-venturi carb; 80bhp at 5300rpm
Front drive: 5 gears; 20.8mph/1000rpm (top)
Suspension: front—ind MacPherson damper/struts, anti-roll bar; rear—ind MacPherson damper/struts, four link location
Steering: rack and pinion, 3½ turns/34½ft circle; 4½J wheels, 155SR 13 radials
Brakes: servoed discs front/drums rear

Parts/repairs (inc VAT)

clutch £17.16 (fitting 6.4hr)
exhaust £90.29 (1.6hr)
headlamp unit £14.95 (0.8hr)
front bumper (3-piece) £42.18 (1.8hr)
laminated windscreen £61.40 (1hr)
oil filter (no points) £2.30 (0.2hr)
major service 5000 miles (av 4hr)

	per year	per mile
Running costs	£681	5.68p
Loss of value	not yet known	
Total depreciation	not yet known	
Insurance group	5	

MORRIS MARINA 1700HL

Front engine: 1700cc/4cyl, OHC (belt); one SU vari-jet carb, 78bhp at 5150rpm
Rear drive: 4 gears; 17.9mph/1000rpm
Suspension: front—ind torsion bars, lever arm dampers, anti-roll bar; rear—leaf-sprung live axle, telescopic dampers, anti-roll bar
Steering: rack and pinion, 3½ turns/33½ft circle; 4½J wheels, 155SR 13 radials
Brakes: servoed discs front/drums rear

Parts/repairs (inc VAT)

clutch £37.78 (fitting 2.7hr)
exhaust £45.14 (1.05hr)
headlamp unit £6.73 (0.4hr)
front bumper £25.70 (1.7hr)
laminated windscreen £32.94 (1.1hr)
oil filter and points £3.72 (0.09hr)
major service 12,000 miles (3.35hr)

	per year	per mile
Running costs	£631	5.26p
Loss of value	£233	1.94p
Total depreciation	£888	7.4p
Insurance group	3	

FORD ESCORT 1.6 GHIA

Front engine: 1598cc/4cyl, OHV (chain); one Weber double-venturi carb; 88bhp at 5500rpm
Rear drive: 4 gears; 18.7mph/1000rpm
Suspension: front—ind damper/struts, anti-roll bar; rear—leaf-sprung live axle, anti-roll bar
Steering: rack and pinion, 3½ turns/31½ft circle; 5J wheels, 175/70SR 13 radials
Brakes: servoed discs front/drums rear

Parts/repairs (inc VAT)

clutch £30.81 (fitting 2.3hr)
exhaust £32.23 (0.7hr)
headlamp unit £17.05 (0.5hr)
front bumper £25.63 (0.4hr)
laminated windscreen £32.40 (1.5hr)
oil filter and points £4.63 (0.3hr)
major service 6000 miles (av 1.8hr)

	per year	per mile
Running costs	£609	5.08p
Loss of value	£46	0.39p
Total depreciation	£754	6.28p
Insurance group	5	

THE RIVALS CLOCK IN

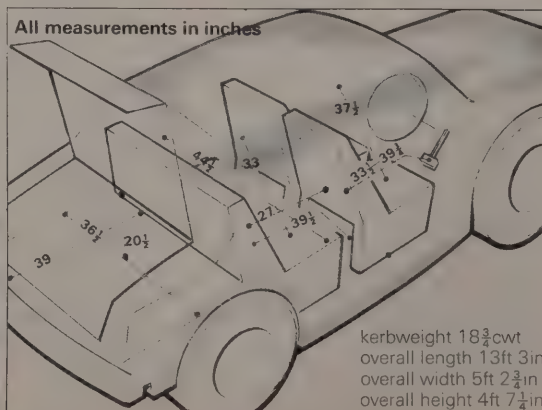
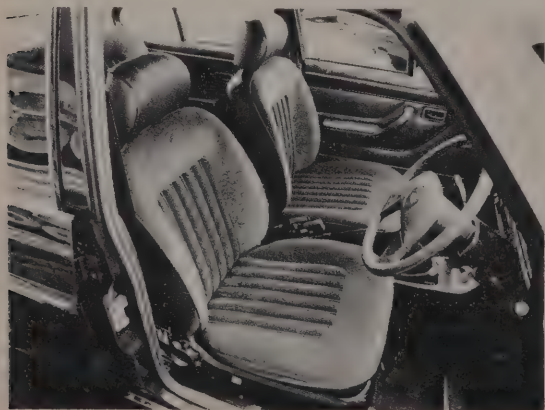
Triumph 1500 HL

Pugeot 305 SR

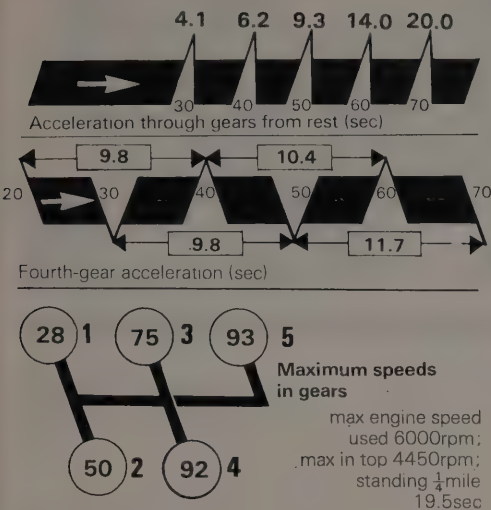
VW Golf 1460 GLS

Toyota Carina (auto)

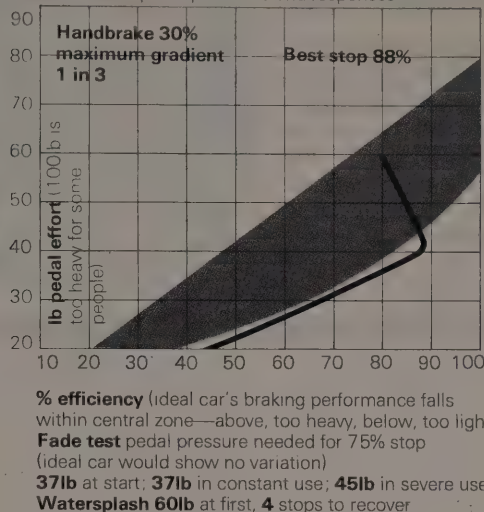
Lada 1600 ES



PERFORMANCE



BRAKES—pedal pressures and responses



FUEL 2-star/91 octane min
overall consumption 35mpg
effective tank range 350 miles/10gal

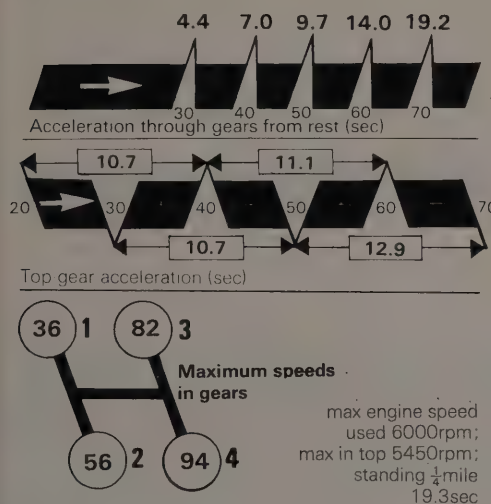
Normal range of consumption

hard driving, heavy traffic	27½mpg
short journey, suburban	29½mpg
motorway—70mph cruising	32mpg
mixed roads—brisk, 50mph cruising	35mpg
quiet rural—40mph cruising	41½mpg
Consumption at steady speeds	
30mph	51
56mph	37½
70mph	29½
max mph	19

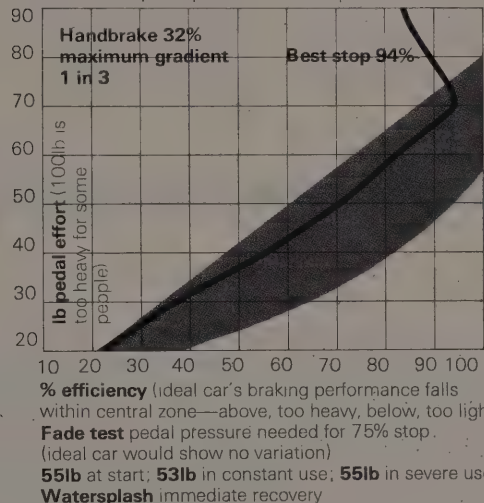
SAFETY CHECKS

steering: energy absorbing?	Yes	hazard warning: fitted?	Yes
front seats: secure mounts?	Yes	interior: well padded?	No
head restraint?	Yes	w/screen: laminated?	Yes
front belts: effective?	Yes	doors: crashproof?	Yes
convenient?	Yes	childproof?	Yes
rear belts: fitted?	No	petrol: spillproof?	Yes
		brakes: failsafe?	Yes
		load sensitive?	No

PERFORMANCE



BRAKES—pedal pressures and responses



FUEL 4-star/97 octane min
overall consumption 29½mpg
effective tank range 295 miles/10gal

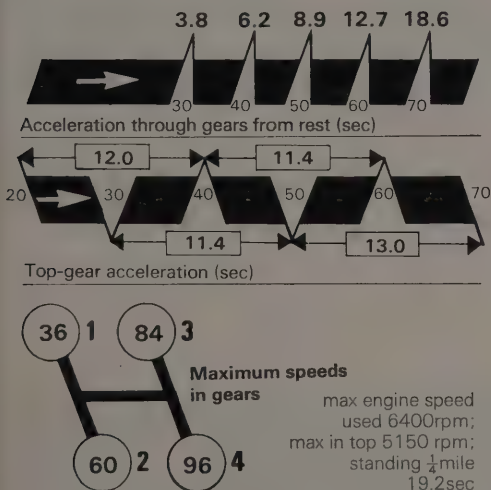
Normal range of consumption

short journey, suburban	23mpg
hard driving, heavy traffic	24½mpg
motorway—70mph cruising	26½mpg
mixed roads—brisk, 50mph cruising	30½mpg
quiet rural—40mph cruising	37mpg
Consumption at steady speeds	
30mph	42½mpg
56mph	33mpg
70mph	26½mpg
max mph	17mpg

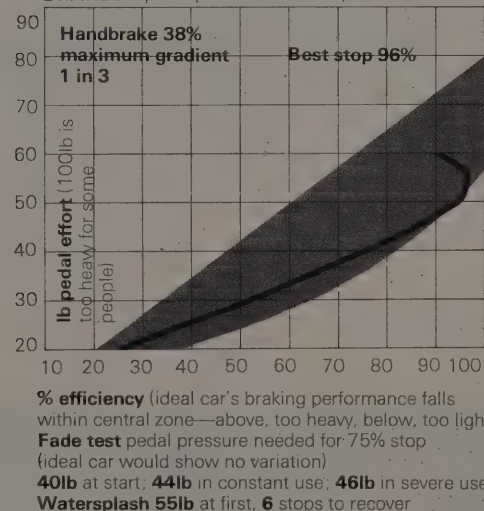
SAFETY CHECKS 0 = factory fitted option

steering: energy absorbing?	Yes	hazard warning: fitted?	Yes
front seats: secure mounts?	Yes	interior: well padded?	No
head restraint?	Yes	w/screen: laminated?	0
front belts: effective?	Yes	doors: crashproof?	Yes
convenient?	Yes	childproof?	Yes
rear belts: fitted?	No	petrol: spillproof?	No
		brakes: failsafe?	Yes
		load sensitive?	No

PERFORMANCE



BRAKES—pedal pressures and responses



FUEL 4-star/97 octane min
overall consumption 33½mpg
effective tank range 260 miles/7½gal

Normal range of consumption

hard driving, heavy traffic	26½mpg
short journey, suburban	26½mpg
motorway—70mph cruising	33mpg
mixed roads—brisk, 50mph cruising	36mpg
quiet rural—40mph cruising	41mpg
Consumption at steady speeds	
30mph	54½mpg
56mph	40½mpg
70mph	33mpg
max mph	19mpg

SAFETY CHECKS 0 = factory fitted option

steering: energy absorbing?	Yes	hazard warning: fitted?	Yes
front seats: secure mounts?	Yes	interior: well padded?	No
head restraint?	Yes	w/screen: laminated?	0
front belts: effective?	Yes	doors: crashproof?	Yes
convenient?	Yes	childproof?	Yes
rear belts: fitted?	0	petrol: spillproof?	No
		brakes: failsafe?	Yes
		load sensitive?	No

PRICE (£)	CAPACITY (CC)	FUEL OVERALL (MPG)	MAXIMUM SPEED (MPH)	0-60MPH (SEC)	30-50MPH IN TOP (SEC)	BEST STOP (% g/lb)	OVERALL LENGTH (FT/IN)	MAXIMUM LEGROOM FRONT (IN)	TYPICAL LEGROOM REAR (IN)	STEERING TURNS/ CIRCLE (FT)
3996	1493	31½	89	15.0	11.0	95/60	13' 6"	40	37	3½/30
3994	1472	34½	94	14.1	11.4	88/35	13' 10"	41½	38½	3½/32½
3935	1457	34½	96	12.8	10.9	100/50	12' 2½"	39	37½	3½/32½
3882	1588	27½	92	15.1	7.3 k/d	96/35	13' 10½"	40½	36½	4/34½
2870	1570	29½	92	14.8	9.6	98/30	13' 4"	38½	37½	3/36

k/d—kickdown

Overpage: DRIVE's Everyman panel reports on the Accord, Marina and Escort

Everyman

Fred Wilkins (far right), a 58-year-old civil servant from Basingstoke, Hants, joined the amateur testers of DRIVE's Everyman panel as a stand-in for a 'flu-ridden Roy Kidman. Contented owner of a 1974 Austin Maxi—'I like its roominess, and I've never had to worry about economy'—Fred proved his brand-loyalty by making the Morris Marina his clear winner, followed by the Ford Escort and with the Honda Accord firmly last. But neither of the British saloons impressed fellow-panellists Denise Bewsy and Andrew Perry. They both fell for the sophisticated Accord—a car that, it seems, can only be loved or loathed...



HONDA ACCORD 4-dr

'Quite superb,' said 21-year-old office manager Denise Bewsy, from St Albans, Herts. 'The more I drove it, the more it impressed me. The seats are comfortable, the ride is pleasant, and I liked the gearbox. Fifth gear must be good for motorway driving.'

'All the instruments are easy to read, the clock's a nice touch, and I did like all the warning lights that tell you such things as when to change the tyres. The steering may be a bit quick to self-centre, but it isn't heavy.'

'What *didn't* I like? Well, per-

haps the car could be shorter, to fit more easily into parking spaces; and I appreciate that it could cost more to look after than the other two cars in this group, but I'd happily struggle to find the extra cash.'

Andrew Perry, too, was taken with the Honda's extras. 'Typically Japanese, isn't it? There are lots of useful safety gadgets, and I like the way the seatbelts retract into the door pillars—out of the way of kids' fingers.'

'Dislikes? Well, the back seat looks strictly for two. And I found

the steering *was* heavy—too heavy for parking. The wheel was also cluttered. The headlamps are nasty fly-traps, and the spare wheel is at the bottom of the boot—I always get a puncture when the boot's full.'

'Too flash for me,' was Fred Wilkins' verdict. 'I didn't like those extras, such as the teltales that let you know when you've opened the doors—they're an insult to intelligence, and I don't need any of them. They're also a liability: if a bulb goes, you could easily be lulled into thinking that

the oil filter *never* needs changing.

'I feel sure that half the stuff under the bonnet isn't necessary, and I certainly wouldn't buy a car with all that frippery—my friends would laugh at me...'

'Perhaps it was a bit much to expect Fred instantly to be at home with the Accord,' said DRIVE professional tester Peter Denayer, 'but I'm intrigued that Andrew was "turned on" by the very gadgets that Fred disliked. The fact remains that, with or without the frills, the Accord is a very nice mover.'

MORRIS MARINA 1700HL

'If the Marina's finish and accessories were as good as the Honda's, I might have voted it top,' said antiques dealer Andrew Perry, 34, from Knaphill, Surrey. 'But its shoddy finish made it second in this group for me—there was a hole in the boot floor that hadn't been "stoppered", and the paint was blistering.'

'I was happier with the interior—the radio's easy to reach, and I liked the new facia treatment and the feeling of space that it creates; getting in and out of the back seat

can be extremely difficult, though. 'The gearbox is good—even if the lever could be 4in shorter—and I felt confident in taking the speed well up.'

'What happened to the other half of the driving seat?' asked Denise Bewsy. 'I felt as though I were sliding off it all the time. After three-quarters of an hour, I got out exhausted.'

'I couldn't find how to stop the windscreen wipers, and I didn't like having to reach round the corner for the radio; but the other

instruments were well laid out and easy to find.'

'While the gear change and steering feel good, the car is hellishly noisy at speed. It somehow also feels unstable.'

'As soon as I got in, I felt this was the car for me,' said Fred Wilkins. 'It's comfortable, leg-room is good, the engine would be easy to work on, and I always knew where I was with the gearbox. Unstable? I drive at 50mph, and the Marina suited me.'

'The radio's location wouldn't

bother me, either, because I don't want one in my car; anyway, it's got push-buttons, so you don't have to *see* it to tune it. About all that the car lacks is a fifth gear, like my Maxi's.'

Professional tester Peter admitted that he was also confused by the Marina's wipers, and as disappointed as Andrew with the car's condition. 'If it could be built to higher standards and made trouble-free,' said Peter, 'I'm sure the latest Marina would be as good as many a Japanese.'

FORD ESCORT 1.6 GHIA

Thrown in at the deep-end—like any new-car buyer—Fred Wilkins said: 'I was apprehensive at first, but the Escort's seating is the best of the three—the only seats with such fine adjustment. The driver's headrest is useless, though: if I laid my head back, I ended-up looking at the roof... and every time I looked round, it whipped off my glasses!'

'The engine looks as if it would be easy to work on—important for me, as I like to mess about

with my cars—so it's hard to say why, still, I prefer the Marina. Maybe it's simply because I've never owned a Ford.'

Andrew Perry was far less impressed: 'I thought that, for a top-of-the-range model, it isn't so different from the basic Escort. The seats' mock suede material isn't practical—I kept leaving bits of my jumper on it; the accelerator pedal made my ankle ache; the seat is too hard; the interior is claustrophobic; and the heater is

typically Ford—red-hot or stone-cold, with nothing in-between.'

'The Escort may stop and manoeuvre better than the other two, but it's very much a little toy to throw around—and that's not what I want from a car.'

Denise Bewsy was the most enthusiastic of the amateur testers: 'The Escort is nice and nippy—I could happily zap about in it. But there's a lot of vibration around the 60mph mark.'

'Of the three, the Ford has the

most expensive-looking interior, and I liked the way you can adjust the door mirror from inside. I'd certainly consider buying one—after the Honda.'

Peter Denayer had to disagree with Andrew about the Escort's heater: 'It's the sensitive air-blending type—I like it. And what Fred calls a headrest is really a head restraint: it's not for snoozing on, but to protect the driver's neck against whiplash injury in a rear-end crash.'





GREAT ESCAPES

Bull frights

THE 'FRIENDLY' between scratch teams of locals and holiday campers turned into a battle. Players went flying in every direction. But it was more than the ref's life was worth to show the red card. For that, literally, would have been showing a red flag to a bull.

In the French Camargue they take bullfighting to extraordinary lengths. Nowhere else will you find soccer being played in a bull-ring—not complete with the bull. Nor, for that matter, will you find it staged as a holidaymaker-activity anywhere except in this wilder land of bulls and cowboys

beside the Mediterranean. The brochure of British company Wigwam International, which operates a number of tent and caravan holidays in conjunction with AA's Argosy, had said that a visit to the bullring at Le Grau-du-Roi, near La Marine campsite, was 'a must'. Luckily, perhaps, it didn't spell out why. For campers watching the bullfights suddenly found themselves being asked to volunteer for the crazy football game . . . assured that the bull would be a *petit* beast, with its horns well padded.

But even a small bull weighs half a ton or more, and packs more beef into its tackles than a Rugby League forward, and there was no doubt about who won the 'toss'—the bull, a dozen times and more. But an even more lunatic activity lay ahead: the *Torero Piscine*, in which tourists were asked to risk their necks taking a bath with a bull!

A canvas swimming pool was dragged to the centre of the ring. And the object of the mad game was to see who was brave enough to lie in it while various would-be matadors goaded the bull into having a swim.

The prize for the bathers was a mere 10f—barely enough to buy ointment for the bruises—and the surprising winner was a statuesque German blonde, who earned her money and her

applause as much for ending up nearly topless after getting too close to the bull's horns.

Not that nudity is anything strange in this free-and-easy holiday centre: two miles up the road from the Wigwam camp is one of the longest naturist beaches in Europe.

Despite the inroads made around the Camargue by tourism in the shape of space-age-looking high-rise resorts, its largely unspoilt scenery is a nature reserve in every sense. For this is the land of wild horses and beautiful pink flamingos, where Europe's gypsies congregate once a year (in May) to honour their patron saint in a wild, week-long festival at Les Saintes-Maries.

On the edge of the marshy delta stand several of France's and the old Roman Empire's finest cities.

Their ancient amphitheatres and rich selection of other fine buildings, like those in Nîmes and Arles (Avignon is not much farther away), should not be missed.

Just 10 minutes' drive from the Wigwam camp stands the smaller yet more perfectly-preserved gem of a medieval city—Aigues-Mortes. Wandering round its narrow streets or walking along the top of its walls and 10 gates is as close to stepping back in time as ever you'll get. But you remain very much in the present day at the campsite. Its swimming pool,

pleasant restaurant and small supermarket are modern comforts that offset the simplicity of the tents and caravans. There are also good toilet blocks with plenty of hot water and flush WCs.

Nearby lie dunes backing a 20-mile-long beach that always offers uncrowded stretches. At hand, too, are horse-riding stables and trails, at which campers can get a 20% discount.

Weekly excursions are arranged to parts of the 'cowboy country' of the Camargue, including visits to farms that breed bulls for the *torros*. Some of them stage their own mini bullfights for tourists . . . but they, at least, don't expect you to be good at soccer.

BILL GLENTON

Cost per week for four persons sharing a tent, with car-ferry crossings included, ranges from £160 (extra week £60) in the 1979 Argosy programme. A caravan stay for a similar number at the same camp costs from £184 (£88 extra week). There are moderate reductions for children.

Campers and caravanners shouldn't miss DRIVE's sister-title, TRAIL. And especially not the next issue—on sale 29 March—in which readers are offered, via Wigwam International, exclusive and special-price package holidays at Continental campsites. See also our TRAIL subscription invitation—page 55.

Lighting-up time

Have you noticed how it's so often after dark that your motoring troubles begin? Is there anything much worse than changing a flat tyre on a rainy evening? Or removing petrol-wet sparkplugs by the waverling light of a torch? Or freeing a jammed starter-motor in the grimy, gloomy depths of the engine compartment? To say nothing of blithering through a radar trap in the bible-black night, or losing your way down unmarked lanes, or even having a prang . . . DRIVE seeks to shed light on all motoring's problems, and guard you from them, issue by issue. Which is why it's so very sensible to miss not one . . . with a subscription order for a year's six issues. Keep going, stay safe, remain on the side of the angels by taking your light from DRIVE. Send us your subscription order, today. And stay bright, tonight.

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(d) How many years No Claim Discount will you have earned in your own right? yrs

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Make and model of car including details of modifications

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that does not apply

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If yes, name city, town or suburb where you work

Is your place of work more than 10 miles from your home? YES NO*

(b) Business use by yourself only? YES/NO*

(c) Business use by any other person? YES/NO*

(d) Commercial travelling? YES/NO*

(e) What is your estimated annual mileage? miles

Have you or any other person who will drive this car

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(b) Been involved in any accident in the last five years? YES/NO*

(c) Suffer from any physical disability or infirmity e.g. heart disease etc? YES/NO*

If you have answered yes to 'a', 'b' or 'c' please give details on separate sheet.

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(b) Yourself and wife/husband only ☐

(c) Yourself and one named driver only ☐

(d) Any licensed driver ☐

In the case of (b) and (c) please give details of other driver

or in the case of (d) details of youngest known driver. Age

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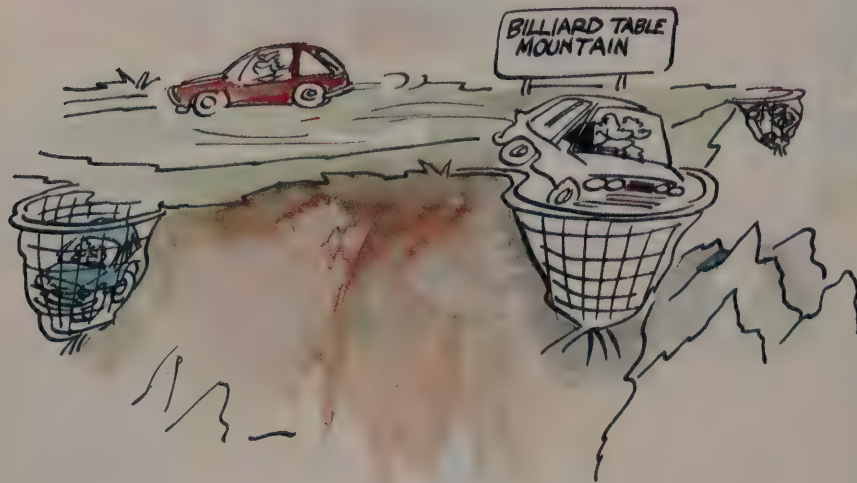
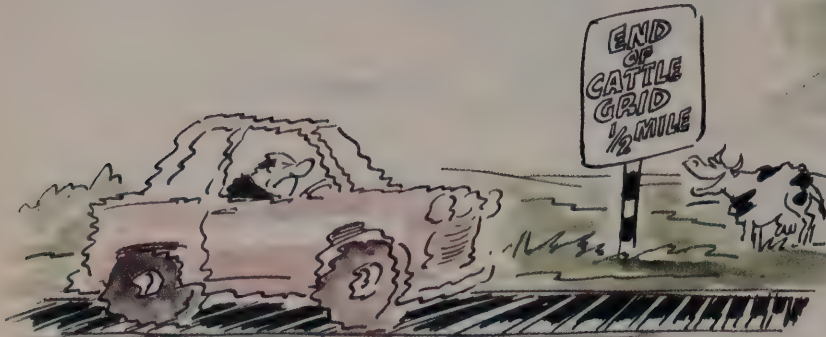
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Least said the better

There are some things about motoring that leave you simply speechless. Especially as seen by Larry ...



In a spin? Lovin' the spin you're in?

Ken Randall

BILL HUNTLEY'S Ford Cortina was due for its first MoT test, and Bill knew that, for the past couple of weeks, the brakes had been feeling a little less powerful than normal. A quick check showed why: the front disc pads were low on 'meat'.

No problem. Replacing pads is a 30-minute job for a competent DIY man, and at a high-street accessory shop Bill quickly found new pads to fit his car. In fact, he had a choice—a well-advertised brand, and a cheaper make that looked identical. Why pay more for the same thing, he reasoned, and bought the cheap set. They fitted perfectly.

A check-on emergency-stopping before the MoT . . . and as Bill's size 10 hit the brake pedal, the back end of the Cortina whipped round in a spin. Fortunately the road was clear. But he could easily have collected a passing car, or a child on the pavement.

'Bill Huntley' is fictional, but the facts are not. In the last three years there has been a frightening number of brake pads on sale in high-street shops—frightening because many are rubbish. And because, despite the weight of legislation covering vehicle construction and use, there's nothing anyone can do to prevent a motorist like Bill gambling unwittingly with his life and the lives of other road-users.

The awful truth, DRIVE has discovered, is that anyone can stick fibrous material to metal plates and sell them as brake pads. 'It's a fact,' says Paul Oppenheimer, technical supremo of Girling brakes, head of the Society of Motor Manufacturers and Traders car brakes technical committee, and the British industry's representative at International Standards Organisa-

tion meetings. 'The replacement brake-pad market is a mess.'

But if manufacturers of reputable brake pads are shaking their heads in disbelief at the many blatantly unsafe products on the shelves, 'pirate'-pad makers are laughing all the way to the bank . . . banks that are likely to be in India, Italy, Spain or S America, where many of the suspect brake pads originate.

During its investigations, DRIVE was given access to confidential test data carried out by the UK brake industry on a selection of cheap imports, all bought from normal retail outlets—tests designed to prove pads made to original-equipment standards for the British motor industry. (They're the pads fitted to your car when it came off the production line, produced as a result of exhaustive research by brake-pad makers such as Mintex, Don and Ferodo.)

The test findings are alarming, and DRIVE, together with car and brake manufacturers, is frankly appalled at a current situation that takes advantage of motorists' ignorance and permits the sale of pads that can

- spin a car out of control when emergency braking at motorway speeds
- lock up far too early under panic braking, with the loss of both effective braking and steering
- 'fade' to such a degree in repeated use that, say, a woman of average strength would not be able to push the brake pedal hard enough to stop the car
- wear out up to 20 times faster than the correct original equipment-spec product.

We have also heard of garages that fit

the cheapest-possible pads—and charge for the best—when motorists put their cars in for the brakes to be 'done', and of second-rate pads packaged up to pass for the original-equipment product . . .

It's hardly necessary to say that braking is a vital function; but the way in which the few square inches of brake-pad material slow the car is complex and safety-critical. 'Near enough' is no standard for brake pads—as the UK makers' tests clearly showed. All were carried out on the same Ford Cortina Mk 3, using the same criteria throughout . . . and the varying performance of the different brake pads under test was, to put it mildly, staggering.

The High-speed Spinner

Source: Italy. Availability: many high-street stores throughout the UK. Application (as stated on the packaging): Ford Cortina Mk 3 1300, 1600, 2000ohc or 1600ohc.

Ford says: 'We specify two grades of friction material for these models—high-friction for the 1300 and 1600, low-friction for the ohc models. A low-friction material fitted to the 1300 and 1600 would lock up the rear brakes too early. At best, that's undesirable; at worst, the driver probably would lose control.'

The tests showed that, at 60mph, the pads had a 30% lower friction level than at 30mph. In simple terms, this means that panic braking at 30mph made the front wheels lock first to give straight-line braking. But a crash stop at 60mph—motorway speed—made the test car's rear brakes lock first, so that the carslewed and

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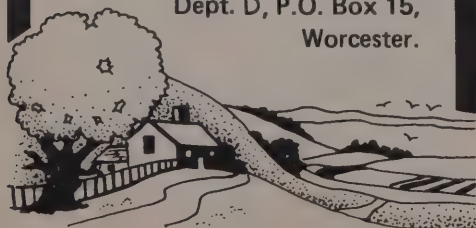
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PIRATE PADS

spun out of control, and on a motorway that could result in an accident involving three lanes of traffic.

The pads also suffered performance fall-off, and demanded much higher-than-average pedal pressures at faster speeds.

By comparison, the recommended original equipment (OE) pads for the Cortina show only a 1% variation in efficiency between 30mph and 60mph, giving stable braking at both speeds.

The Early Slider

Source: Unknown, but believed to be foreign; packed in the UK. Availability: wide. Application: Ford Cortina Mk 3, models unspecified.

One supplier told DRIVE: 'You wouldn't know the maker's name if I told you. They're foreign pads that we have specially packed. They're very good.'

Superficially, they were. 'The pads have an extremely high friction level,' commented the test report. 'Anyone fitting them would probably think they *felt* good—very "sudden" at low-pedal efforts.' But, as Ford's engineers confirm, this could in fact lead to front-brake lock-up at much lower speeds... and a sliding car cannot be steered or slowed.

At 60mph, the pads lost performance by 40%, with the same result as detailed above—only more so.

The Disappearing Trickster

Source: Italy. Availability: mainly small motor accessory shops. Application: servo-assisted Ford Cortina Mk 3.

The pads faded and wore so rapidly during testing that they didn't complete the course, losing 0.267in to expose the back plates. (Recommended Don brake pads lost 0.03in in the same test.)

High wear is nothing unusual with cheap skate brake materials: Automotive Products showed DRIVE a set of 'pirate' pads for a Chrysler Hunter that had worn at almost 20 times the rate of the pads that AP buys from Mintex.

DRIVE has also seen pads where the friction material has been torn from the back plate in a test to simulate the stresses of repeated braking under heavy load, such as when caravan towing down a mountain pass...

Brake pads are a rip-off manufacturer's dream. With the disc-front/drum-rear set-up now used in almost all family cars, brake-system design is highly standardised: the pad on one vehicle may well be the same size and shape as that on a vehicle of totally different weight, speed potential and balance.

Pad makers such as Don, Ferodo and Mintex point to the research and development that they pour into matching the right materials to the make and model of each car—Don, for example, uses 30 different friction materials, each of which may look identical, but only one of which is right for any given application.

If a company wants to supply car manufacturers with OE pads, then it *must* spend

money on research. But 'pirate' pad makers don't supply manufacturers, and they don't have the back-up testing to make sure the product is right for the car,' claims Brian Pratt, car-materials head of Don, who showed DRIVE a set of foreign pads, on sale in the UK, that are claimed to be suitable for a huge range of vehicles, from Ford Escorts to Porsches and Mercedes-Benz models. 'We cover that range with three or four different friction materials,' he says. 'These people use one—that's why they're so cheap.'

Price has been the key to the success of the suspect makes. Front-brake disc pads usually wear out before rear-drum linings and have become what the accessory trade calls 'fast movers', along with windscreen wipers and brake hoses. They're a simple, cheap DIY job—motorists who wouldn't dare to touch brake-relining can change a set of pads in 15–30 minutes. Thus competition is fierce, and price-cutting works in accessory shops and garages.

DRIVE's research shows that many of these 'quickie' outlets sell more than one make of pad—a leading brand (what the trade call a 'premium product') and a cheaper alternative. And, not surprisingly, the cheaper product almost always outsells the premium product, often by as much as four to one.

Of course, cheap doesn't *have* to be nasty; but where there is a need to cut costs without any legislation to safeguard

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TRANSOUND

quality, the dangers are obvious. 'We're getting an increasing demand from accessory shops for a cheaper brake pad,' says Brian Ritchie, of car-parts wholesaler Brown Brothers. 'I've lost count of the number I've been offered in the last couple of years, but most are inferior.'

Ritchie also finds that appearances are deceiving: 'What's written on the pack isn't necessarily what's inside. I've found the same product in three differently-branded boxes. They're simply shipped in bulk from somewhere abroad, and packaged up with someone's name.'

'You get what you pay for,' says Marcus Jacobson, chief engineer of the AA. 'The cost of a brake pad is directly related to the amount of high-grade material and research and development that go into it.' But cost isn't always related to retail price, and what you pay in a motor shop isn't always a reliable guide to quality.

Phoning round with the help of *Yellow Pages*, DRIVE quickly found an accessory shop selling inferior pads alongside Jurid, a German make comparable to Mintex or Ferodo and supplied as OE on several Continental cars. The suspect pads' maker supplies no car manufacturer, yet both pads were on sale at the same price, using the psychology that suggests that one must be as good as the other. The inescapable conclusion was that someone—perhaps the shop owner, maybe his wholesaler, probably both—were 'using

a reputable product to make a bigger profit on a cheap and nasty one.

All these accusations are serious. Safe braking is a serious matter, and motorists have a right to expect safety in this critical area. So why, when it can be shown that there are dangerous brake pads on the market, is their continued sale allowed?

The answer is that they stay on the shelves because no one can forbid them. For all the mass of often-pedantic legislation surrounding car construction and use, *there is no fixed standard for braking performance.*

Car manufacturers have standards, of course, and these must be met by original-equipment materials. And it's true that a brake-pad manufacturer that supplies original equipment to a car maker probably will apply the correct standards of material to any replacement pad that it produces. It is too easy, however, to legislate for OE-replacement parts only. There are such laws in W Germany, and no one in Britain to whom DRIVE has spoken particularly wants to see them here: 'Less choice can't be good for consumers,' says Colin Baker, of AP. 'But we would welcome government standards.'

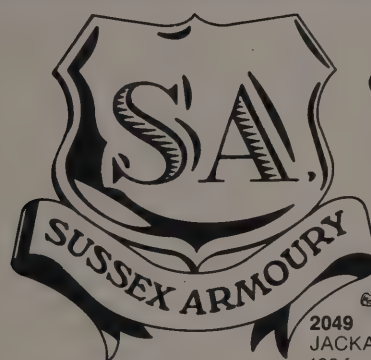
Mike Walton, senior marketing man at Don, would prefer a 'grading system operated by an independent body to approve certain friction materials for certain cars'. But certainly the British

Standards Institution has no plans to draw up brake-pad standards at present. Nor has the government made any move.

'We have had international discussions on the subject,' says Noel Newstead, spokesman for the Department of Transport, and adds only that DoT thinking has been to allow competitive ranges or parts rather than one-make type approval, and to consider legislation *likely* to ensure braking to OE standards.

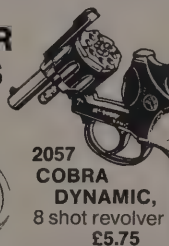
The AA's Jacobson feels that car manufacturers should have the responsibility of recommending specific makes of replacement parts. 'Car makers should specify three choices,' he says. But it isn't a view that finds much favour in the brake industry: 'Manufacturers shouldn't have that power,' one told DRIVE, flatly. Nor will a materials' specification achieve enough. As Brian Pratt, of Don, points out: 'We all use different raw materials and we all manufacture in different ways. It's final performance that matters...'

That would be fine if there were an internationally-accepted yardstick by which to judge pads' performance. Then it would be a simple matter to require pad makers to match their products to an approved standard—as happens in certain states of America. In the UK today, however, you plump for the original-equipment part, or take your chance. And as one brake manufacturer comments, wryly: 'Dead men don't come back to complain.' MIKE HILL

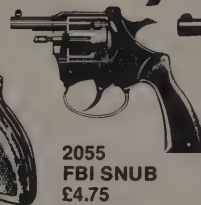


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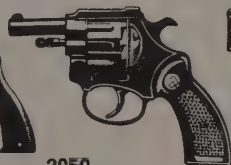
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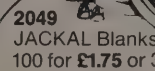
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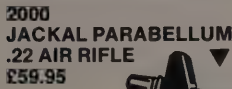
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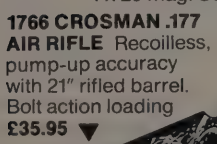
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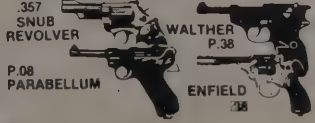
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The customer is always...

'MAKE IT £150 and I'll take it as it stands,' said the punter. 'No come-backs. I promise.'

'It' was a Volkswagen 1600 fast-back, and it had stood on my used-car lot long enough to give birth. The paint had weathered to a white dust that came off on the sponge during its weekly wash; the £195 price-label had melted on to the windscreen. But we gave it little runs round the block to keep the oil circulating, it had a current MoT and we had given it a bit of a service. Apart from being lefthand-drive, it was worth the money at £195. But 150 dirty pound notes tempted me...

I'd hardly had time to fiddle the books before the punter was back. 'The wheels are dropping off,' he said.

We get them like that all the time. Nutters.

I wheeled out the trolley-jack, lifted up the front, heaved on the nearside front tyre... and there couldn't have been more than a couple of thou play. 'Where?'

'Well, they were nearly dropping off at home,' he said.

I let down the jack and went to shake the wheel again, to prove him wrong. And this time there was about 3in movement. The whole front unit was loose.

That's how it had passed our servicing, and that's how it hadn't been spotted in the MoT test: in both cases the front end had been jacked up, and in that position everything felt fine. Put weight on the wheels, and the fault was obvious.

'I've got to admit you are right,' I said.

'It should never be on the road,' he said. 'I am going to see my solicitor about this. And Esther Rantzen.'

'Is she good at repairing Volkswagens?' I said.

There is a repertoire that punters run through. He was on Page 1 of the script. He still had to ask what would have happened if it had broken down miles from anywhere? What would have happened if a child had been running across the road at the time? How was he going to get his grandmother to church on Sunday?

I never listen to it all, because if there is anything that makes me annoyed it is a punter who cries before he gets hurt.

So, we made a mistake. I make lots of mistakes. If he'd shut up, I would have told him that we would put things right. Free. But then he said something that made me change my mind.

'You dealers are all the same.

Arnold Handley claims to be an expert on motorists' complaints. And certainly he has had a lot of experience of them... from the wrong end. He is a motor trader

And that garage that signed the MoT must have been bribed. This ought to be a police case...

The rest of the script was hot air. This was an insult.

Now we deal with an old-fashioned, dead-honest test centre with a high failure-rate. When a car is passed, it usually means that its owner has got a good one. This VW was the first time it had slipped up.

'Stuff you,' I said. 'So sue me. You wanted a cut-price motor, and the agreement was that you bought it without guarantee. Now it's just your hard luck.'

He went through a quarter of an hour of shouting and arm-waving. Then he said something that completely swung the argument.

'Suppose I'd spotted this wheel-play last week, when you were giving me all that sales chat, trying to sell it to me. Wouldn't you have repaired it free of charge then, to make the sale?'

He had me. He was right.

'Then, to be fair, you should repair it now,' he said.

He got his Volkswagen repaired. It cost me nearly as much as he'd paid for the car. But it was right that I should be the loser...

It's no good telling a car dealer that he's a crook. Legal threats don't frighten us. The thing that works is reason.

I use it myself when I have a complaint. Not with cars, of course, because if I buy a dud

motor it's my own fault. But with washing machines and televisions and cameras, I say to the shop manager: 'It's not your fault, you didn't make it, but there's been a slip-up in manufacture. Can you sort it out for me?'

The only time that sweet reasonableness doesn't help the motorist is when he really is dealing with a crook. They exist, and the most difficult of all are those private vendors who are unhampered by trade ethics and consumer laws. Traders like me enjoy making a profit out of a car; crooks only enjoy conning the punters.

So when you buy privately, do what the books say. Vet the motor, and check that the seller really owns it; find out if its age and mileage are true; and do one more thing... hang on to your money.

If the vendor promises to fix the wipers, hang on to your money until he does so. If he promises to post the licence document on to you, pay him *after* you have received it. If he says that the new tyres he's promised haven't arrived because of a strike, but they'll be in for sure on Tuesday, and he needs your money now because he promised to buy his children new shoes... tell him hard luck, and you'll pay him Wednesday.

The man holding the money is always in control of the deal.

That's why when we repair a car it never leaves our workshop until the customer pays cash. The law calls it repairers' lien.

Like last week, when we were fitting an engine into an Austin 1800 and all the dealings were done by the owner's wife. We never met her. She was just an aggressive voice on the telephone.

'You were supposed to be waiting for us to leave the car last night, and you were closed,' she started up. 'I know we were a bit after closing-time, but you might have waited five minutes. If that's all you think of our custom, remember who it is who pays your wages. We had to put the keys through the letterbox; suppose thieves broke in and took away our car, who would have paid for the damage then...?'

Most people complain *after* we have repaired their motor. She was setting up a world speed-record by complaining beforehand.

When the old engine was taken out, we found the clutch and waterpump worn. 'Well,' she said, 'they were all right before you started messing about.' And when the new engine was in and it wouldn't pick up sweetly because of a flat-spot in the carburettor, we tossed up for who should tell her the news.

In a way, her aggression worked: no one told us that it was an automatic when we did the first



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estimate over the telephone, so she got away with £3-worth of automatic fluid that we were too timid to charge for.

On the other hand, we refused to release the vehicle until she paid notes. Not a cheque, because we knew that she would be the sort to stop the cheque as soon as she got home. We also listed every suspect ancillary, and made a formal note of her refusal to allow us to replace them. And her husband—who was ever such a quiet bloke—staggered off with an 1800 that was running lumpily because we had done exactly no more and no less than we had been paid for.

To us, conflicts over repairs are simple. There is none of the irrational emotion found with used-car buyers, who want roomy yet small, powerful yet economic, unobtrusive yet ostentatious, cheap yet expensive motors painted in a reddish sort of green. With a repair, if it is half a thou oversize it will rattle; if it is half a thou undersize it will seize. There should be no argument if a repair ever goes wrong.

But there is.

A pretty little girl bought a Vauxhall Viva engine from us and her boyfriend fitted it. Six months later, she complained that our engine was no good because it was (a) knocking, (b) overheating, (c) vibrating.

We apologised. We ran about in a flap, and regular customers had their repairs delayed while we gave the Viva priority. The check showed that (a) the propshaft universal joints were finished, (b) the ignition was retarded, the thermostat jammed and the radiator blocked, and (c) the engine mountings were loose.

And our engine? Perfect.

I know of one garage where a punter complained: 'When you fitted this new engine you put the oil light in upside-down.'

The worried fitter switched on the ignition and the light came on. He blipped the throttle and the light went out. 'So?' he asked.

'There you are!' said the punter. 'With my *old* engine, that little light used to shine beautiful all the time.'

Only yesterday, a woman complained to me: 'My car you've just serviced has a funny noise. I'm not mechanically-minded, but it sounds just like a beer bottle rolling about in the boot.'

We all fell about laughing. It made a nice addition to the trade's women-driver stories. Then I wiped my eyes, drove her motor on to the hoist, checked the spring shackles, looked for play in the shock absorber mountings, checked that the exhaust was clear of the underbody.

Nearly an hour later I lowered the hoist and looked in the boot. And found a beer bottle.

Rolling about.



1988, here I come!

So says the proud owner of the latest car to check in for long-term assessment by DRIVE's technical experts. As it gets its first inspection (below), hours after delivery, the Alladin 100i that we took into the Long Term Test Club in January 1977 makes its well appearance at 10,345 miles (opposite)

ANYONE BUYING a car to last 10 years is sure to give a lot of thought to their choice. But there can be few buyers who research the market quite as thoroughly as DRIVE's new long-term-test owner, Elizabeth Haliburton-Wareham.

Elizabeth, 33-year-old wife of a chartered accountant from Thatcham, Berks, traded in a 1976 Fiat 127S for a Peugeot 104SL last October, simply to gain two extra doors. 'I have a bad back, and humping an infant in and out isn't on with a two-door car,' she says. 'I also needed a hatchback because the family will soon

increase in size, and I shall want to put a carry-cot in the back...'

'I thought of Japanese cars like Honda and Datsun, but I reckon the government is going to clamp down on them by taxing parts, or something. We've had several Toyotas, and they were all fantastic, but I decided it had to be a European car. The search pointed to Renaults, but the 4 is too basic and the 14 too big.

'When we lived in Kenya, we met several Peugeot owners who seemed never to service their cars—yet they kept going, and to my mind that meant reliability. As soon as we saw the 104, we said

OK. It really is so well made—rather like a French Rover...'

'Metallic paint was out because of repair problems, but I wanted a safe colour. Lime green looked vile, so I settled for orange.

'The car will be used just for shopping, going to the golf club and the school run, and it has to last me 10 years. That's why we've had it Ziebarted for an extra £100.

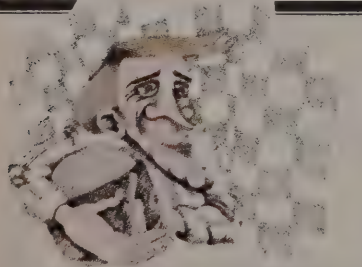
'It certainly is more comfortable than the Fiat. Disappointments? Well, there's no carpet in the back, but I suppose that's practical; and I found a dirty patch on the front carpet...'

'Buy British? No, not again. We

once had a Mini that was always going wrong, and nobody seemed to care at all. But we would consider a Rolls-Royce, of course!'

Within 46 hours of the Peugeot being delivered from A & B Motors (Hermitage), of Newbury, Berks, AA engineer Chris Warwick was giving it DRIVE's Check 1 at Basingstoke. He concluded that the vehicle was in a 'reasonably satisfactory' condition: the carpet stain was cleaning fluid, he thought.

On the ramp, Warwick pointed to an engine oil leak, apparently from the valve-cover gasket. The oil filler cap had a twisted retain-



MOTOR SPORT Wheels within

FIFTEEN YEARS AGO, top professional racing drivers used to drift casually from one European race to the next via favourite resorts and watering-holes, taking in as many Michelin-starred restaurants as they could. So to the top pro of that era his road car was almost as important as the car he drove on the race track: Grand Touring cars and open-topped sports models were the order of the day.

Today, with more races to enter, the drivers' schedules are more demanding, and few of them have the time to travel by road. Indeed,

the majority of top drivers spend more time commuting in light aeroplanes and helicopters than they do in cars. The race-track hero of yesteryear, winding his way over the Alps in his rag-top, has been replaced by the briefcase-carrying businessman, dashing from the airport's Avis parking lot, waving his airline credit card and hoping to make his next racing or business date.

Do any of the Grand Prix drivers still enjoy their private motoring? Well, Ferrari's Jody Scheckter, a South African living in Monaco, is one of the

few who has a feel for his personal wheels—but it's happened only recently. In 1977 he bought a 10-year-old Rolls-Royce S3 that he garages in London. 'It's a gentlemanly way to travel,' says Scheckter.

At home, in Monaco, £27,000 worth of new light-brown Ferrari 400 sits in his garage, bought to celebrate his Ferrari contract: 'And, believe me, you do buy them—even when you're a Ferrari driver. There's no such thing as a free sample here.' Ferrari's test track is a 3½-hour drive from Monaco and Scheckter



Rod Clarke

ing clip, and the engine idled too quickly; more seriously, clutch spin made it difficult to engage first gear at rest, and 'quiet' selection of reverse was impossible—a problem eased by adjusting the idling speed.

The Ziebart treatment was adequate, apart from a number of badly treated patches and some parts that had been missed.

Elizabeth is unquestionably the most fastidious lady driver we have met in many a year, and she quietly noted Warwick's every criticism at Warwick's every criticism of ending up with a well-sorted car must be high...

has to be there at least once, often twice a week: 'For that sort of journey I need something fast and comfortable, and this is it,' he says with some pride.

World champion Mario Andretti is a self-confessed car freak. At his home in Nazareth (USA) he has a motor 'house' to accommodate all his 'toys'—a selection of snow-mobiles, karts, buggies, motorcycles and cars.

Andretti has cars to fit his every mood: a camper for week-ends with his wife and three children; a bright yellow Ferrari 'because it's really so much

OUR SECOND long-term-test owner couldn't wait to finish his year with DRIVE. It wasn't that British Airways pilot Tony Colin grew upset as our engineer, Chris Warwick, picked up every minute defect in Tony's dark blue Alfasud 1300ti; it was just that BA made him an offer he simply couldn't refuse.

With 10 months' Alfasud ownership under his belt, Tony locked the car away under dust-sheets in his Berkshire garage and packed off to fly for BA in Australia for four months, with his wife Sjaan and baby Laura. However, DRIVE was left in charge of the car keys, and, with 10,345 miles clocked up, the Alfasud was brought in to the AA's Basingstoke technical research centre for its final check.

The car had been serviced at 10,000 miles by Ormsby Cars, of Reading, Berks, who had also tackled a brake problem: the Sud was pulling to the left due to a drive-shaft oil seal leak. The sunshine roof had become too stiff to operate; and Tony was also complaining about the effort needed to shut the car doors, particularly the driver's.

Warwick noted that the door problem was a catchplate in need of adjustment. He also observed that the rubber trim was falling off the front bumper, and that there was early evidence of rusting in door-skin seams and the bonnet panel stiffener.

The engine condition was generally satisfactory, apart from just a touch of oil seepage, and it was well tuned. There was surface rusting on the exhaust pipe, and slight clutch spin made it difficult for rapid changes into first or reverse gears.

On the ramp, Warwick noticed that Ormsby had fitted a new off-side front disc as well as new front brake pads—the old disc had been slightly pitted and scored. However, the nearside front brake was binding, and Warwick recommended early attention.

Readers may remember that, before Tony Colin had owned the Alfasud for 24 hours, he was having minor problems: he trotted out to his garage one bleak January morning last year to find that the battery had been flattened

fun to drive'; a beige Cadillac Seville 'for going to do business in', and a black Lotus Esprit that 'comes with the job'.

In contrast, Niki Lauda, the man who bounced back after being given the last rites, is an aviation buff. He owns two aeroplanes and spends as much time in the air as he can. But in the garage of his Salzburg home is a Rolls-Royce S1, restored for him by the Crewe factory. 'It's the permanent resident here,' says Lauda, dismissing with a wave a selection of Alfias and Fiats that he describes simply as 'sets of



Anthony Peagam

by a faulty stoplight switch; and when he manoeuvred the car into the AA's service bay for Check 1, he couldn't get out—a faulty door catch was to blame.

But love conquers all, and Tony was even sanguine when research engineer Lawrence Pearce found that the Endrust treatment had missed the front box sections and the double skin round the rear suspension pick-up points.

A second opinion was called for, and an AA corrosion expert moved in with an endoscope to discover a nasty red blotch in the offside front wing: 'There's nothing you can do about it,' Tony was

told. 'Spraying rust protection in there will simply accelerate the corrosion outwards...'

Pearce also found a tyre over-inflated by nearly 30%, two spanners missing from the Sud's toolkit, a defective brake-fluid warning light and an over-filled sump. He noted a plastic cap missing from a hole drilled by the Endrust operator, severe pitting in the chrome on the driver's door mirror, and an assortment of paint blemishes... but still Tony Colin went home a happy man.

A fast drive to Holland helped him to reach his first 1500-mile service in double-quick time.

wheels'. James Hunt, formerly Britain's number one GP star and now a tax exile in Spain, is another Mercedes man. His garage in Marbella houses, the most expensive of the Mercedes range, the £26,000 450SEL.

'Sadly, I don't use it for much more than going to the golf course and Malaga Airport—but it's the car, no mistake,' says James. When in England, Hunt uses a black Vauxhall Chevette, which he calls Boris, as part of the deal he has with Vauxhall for advertising its products.

Frenchman Patrick Tambay,

former Olympic ski champion and now Marlboro-McLaren's GP driver, sums up many drivers' attitudes to personal cars: 'I don't think any of us like cars—they're simply the tools of our trade. But if you're a professional, you're expected to be seen with good and glamorous cars.'

Scheckter's opinion is even more realistic: 'Cars are a rotten investment. They cost a fortune and depreciate at three times the speed of inflation. My Rolls will appreciate; it's hedge against the depreciation on the Ferrari.'

NICK BRITTON

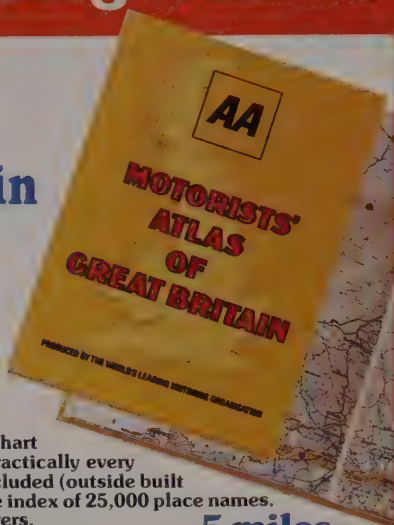
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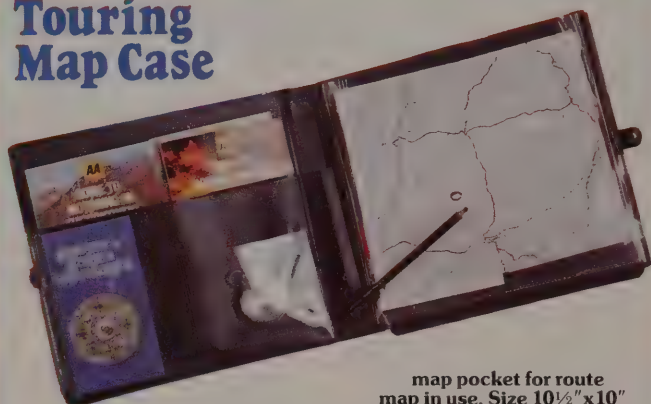
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LONG TERM TEST CLUB

Ormsby Cars decided to respray the scratched bonnet and boot lid—a job well done—replaced the pitted mirror and told him that the rev counter was inaccurate and would be replaced free of charge.

DRIVE was impressed, and, when the Alfa reappeared for Check 2, last March, Chris Warwick scratched his head and muttered: 'I can't find anything wrong with this car.' But Tony Colin was getting the idea, and he was able to draw Warwick's attention to the way the driver's door was rubbing paint off the door pillar, allowing red primer to show through.

An indication of what a thorough service can do was given by Tony's petrol logbook: careful brim-to-brim checking told him that overall consumption had risen from 28½mpg to 31mpg after Ormsby's 1500-mile check.

Stereo radio and cassette player were next on the list for the gadget-keen Tony, and contact-breaker points were replaced by a Lumenition electronic ignition system. The latter proved difficult to fit, but once in place it gave no cause for concern; Tony was sure that he had made a shrewd move. Ormsby Cars, meanwhile, were fitting a third rev counter, and attending to a low-reading oil-pressure gauge, which turned out to be a trivial transmitter problem.

As the weather warmed up, Tony reported 34mpg after a long motorway blast. A similar car on a DRIVE short-term test at the time returned 32½mpg...

On 6 September, Check 3 ended with Chris Warwick admitting that there was 'very little of significance to report'. Underside, a new transmission end-plate gasket had been fitted, reducing the oil leak, but seepage from the oil filter suggested a faulty seal between the filter canister and its mounting.

Brake problems were starting to show, however, and Warwick noted that the nearside rear brake disc was rusty and scored on its inner face, possibly from long periods parked at Heathrow Airport. On the road, the car pulled to the left.

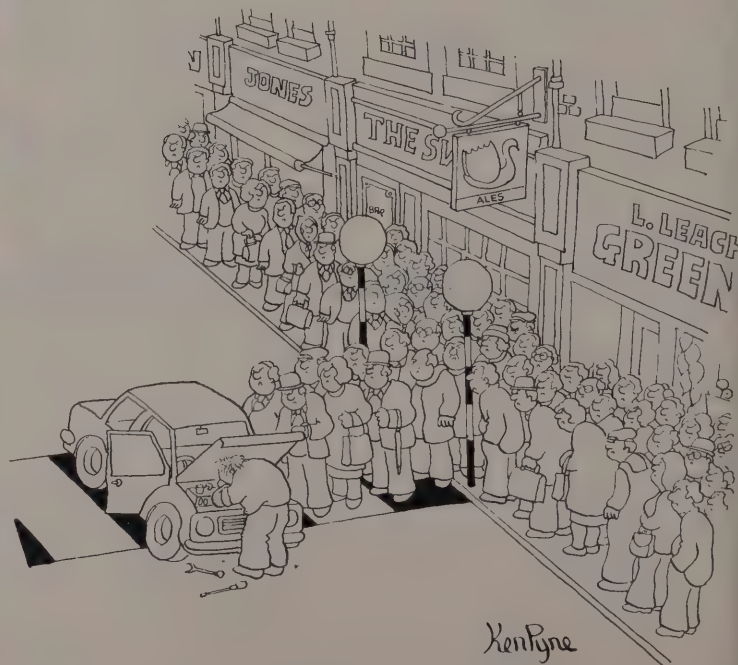
Compared with the virtually faultless Ford Cortina 1600GL to which DRIVE bade farewell in the last issue, Tony's Alfasud has had its share of niggling faults. But in Tony Colin, Alfa Romeo and Ormsby Cars surely could not have found a more-demanding customer: a pilot who demands perfection of all his machines.

To Ormsby Cars' eternal credit, it provided a degree of service hard to equal. If all Alfasud buyers enjoy such treatment, they are indeed a privileged crew...

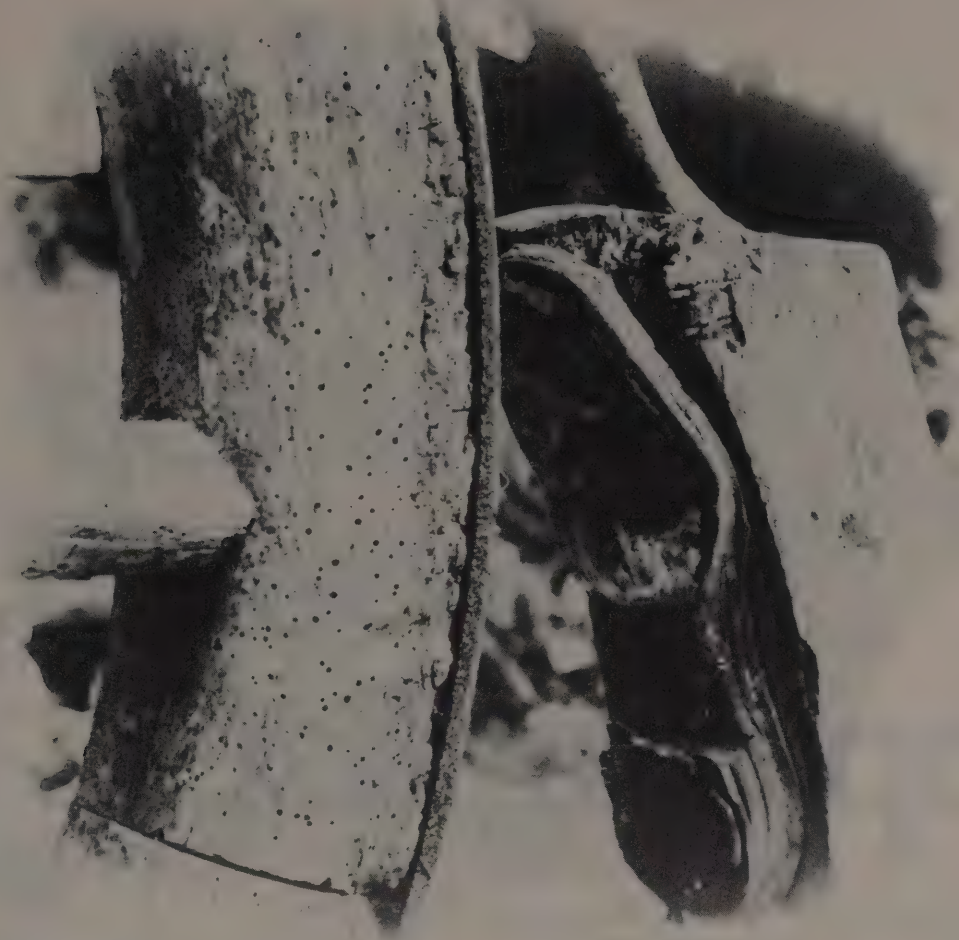
ROBERT OXFORD

Long-term experiences invited

Help our long-distance runners from getting too lonely by telling us of YOUR experience as an owner-driver of a Peugeot 104SL or any of the other models currently under long-term test with DRIVE. Owners of Austin's Allegro 1300 Super can contribute to next issue's review of Peter and Jackie Murray's car as it bows out of our club. How rare was its leaking half-shaft seal, and how common its overall 36½mpg? Or tell us about DRIVE's other cars: the Citroen CX2400 Super C-matic, Toyota Celica XT2000, Triumph TR7 and—newest of all, in our next issue—the Volvo 244DL, recently bought by 26-year-old Guildford surgeon Sheila Platt.



Ken Ryne



The Original Brake Shoe?

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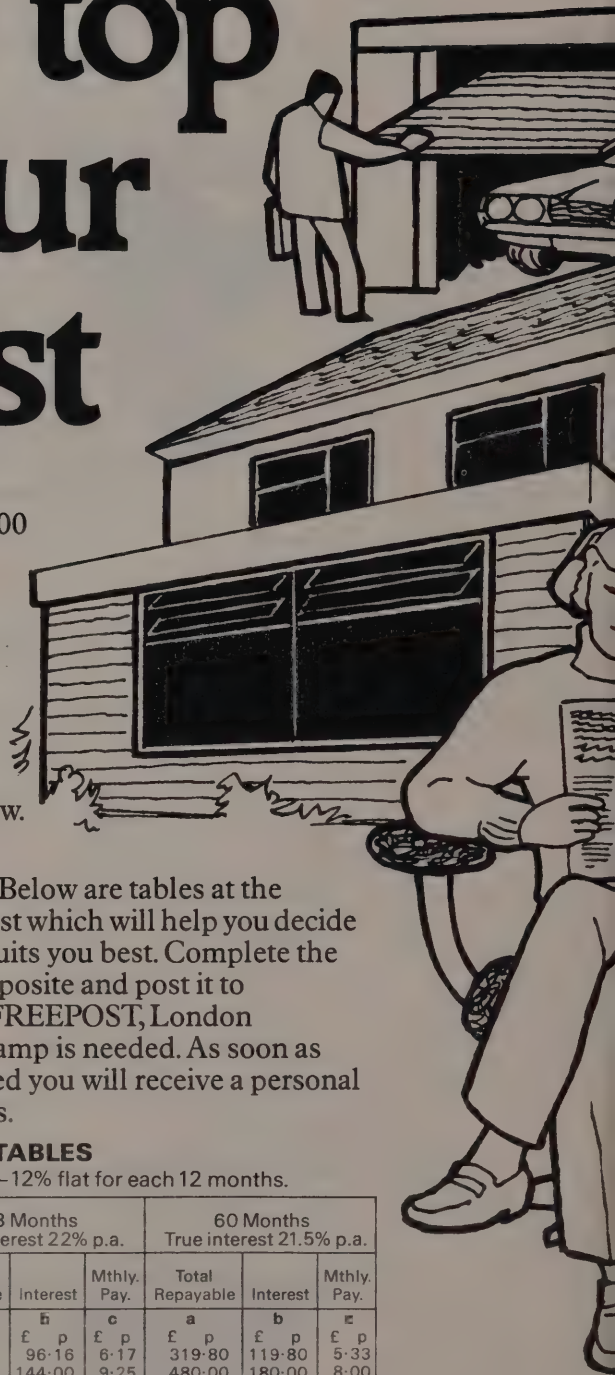
Apply now Below are tables at the current rate of interest which will help you decide on the loan which suits you best. Complete the application form opposite and post it to Mercantile Credit, FREEPOST, London WC2B 5XA... no stamp is needed. As soon as your loan is approved you will receive a personal cheque in a few days.

AA MEMBERS' LOAN MONTHLY REPAYMENT TABLES

Interest on amount of loan: 1-2 years - 11.5% flat for each 12 months 3-5 years - 12% flat for each 12 months.

Amount of loan	12 Months True interest 22.5% p.a.			24 Months True interest 22.5% p.a.			36 Months True interest 23% p.a.			48 Months True interest 22% p.a.			60 Months True interest 21.5% p.a.		
	Total Repayable	Interest	Mthly. Pay.	Total Repayable	Interest	Mthly. Pay.	Total Repayable	Interest	Mthly. Pay.	Total Repayable	Interest	Mthly. Pay.	Total Repayable	Interest	Mthly. Pay.
	a p	b	c	a p	b	c	a p	b	c	a p	b	c	a p	b	c
£	£	£ p	£ p	£	£ p	£ p	£	£ p	£ p	£	£ p	£ p	£	£ p	£ p
200	222.96	22.96	18.58	246.00	46.00	10.25	272.16	72.16	7.56	296.16	96.16	6.17	319.80	119.80	5.33
300	334.56	34.56	27.88	369.12	69.12	15.38	407.88	107.88	11.33	444.00	144.00	9.25	480.00	180.00	8.00
400	446.04	46.04	37.17	492.00	92.00	20.50	543.96	143.96	15.11	591.84	191.84	12.33	640.20	240.20	10.67
500	557.52	57.52	46.46	615.12	115.12	25.63	680.04	180.04	18.89	740.16	240.16	15.42	799.80	299.80	13.33
600	669.00	69.00	55.75	738.00	138.00	30.75	816.12	216.12	22.67	888.00	288.00	18.50	960.00	360.00	16.00
700	780.48	80.48	65.04	861.12	161.12	35.88	951.84	251.84	26.44	1,035.84	335.84	21.58	1,120.20	420.20	18.67
800	891.96	91.96	74.33	984.00	184.00	41.00	1,087.92	287.92	30.22	1,184.16	384.16	24.67	1,279.80	479.80	21.33
900	1,003.56	103.56	83.63	1,107.12	207.12	46.13	1,224.00	324.00	34.00	1,332.00	432.00	27.75	1,440.00	540.00	24.00
1,000	1,115.04	115.04	92.92	1,230.00	230.00	51.25	1,360.08	360.08	37.78	1,479.84	479.84	30.83	1,600.20	600.20	26.67

For loans in excess of £1,000, total repayable, interest and monthly payment are pro rata. Rates at 1st January 1979.



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To apply for your AA Members Loan complete this form and post to
Mercantile Credit, FREEPOST, London WC2B 5XA.

Surname _____

First Names _____

Married/Single _____ (Tick as applicable)

Country of Birth _____

Date of Birth _____

Are you in good health? YES/NO _____ No. of dependent children _____

Full postal address _____

Postal Code _____

How long at address? _____

Tel. No. _____

DEPT.

SERIAL NO.

CHECK DIGIT

For office use only

Owner/Tenant House/Flat/Rooms/
Living with parents _____ (Tick as applicable)

Profession or trade _____

Name of employer _____

Business Address _____

How long in their employ? _____

Bankers _____

Bankers address (in full) _____

Do you hold a Barclaycard? YES/NO _____

AA Membership No. _____

Purpose of loan (give details) _____

Total cost of goods or service £ _____

Amount of cash required £ _____

Repayment period required _____ months

Average net monthly take-home pay (i.e. after
deduction of Income Tax, N.H.I. Contributions, etc.)
£ _____ monthly

Any other income £ _____ monthly

Please submit your latest P.60 or other annual
advice or at least two monthly/weekly pay slips

Mortgage payments/Rent £ _____ monthly

Total of current hire purchase and credit payments
£ _____ monthly

Any other regular payments £ _____ monthly
(Give details)

You may make all enquiries necessary to enable you to consider
this application and also to disclose to the National Credit Register details
in respect of this transaction excluding any information relating to income.
It is understood that you reserve the right to decline this application
without stating a reason. Membership of the Automobile Association or
a previous or current account with Mercantile Credit do not of themselves
ensure acceptance.

525

SIGNATURE _____

DATE _____

Letters

Views to air? Tell DRIVE about your motoring and what it means to you. You can send letters for publication—unstamped—via DRIVE Directory, FREEPOST, Basingstoke, Hampshire RG21 2EA

Vaux unpopular

We are encouraged to 'buy British', but, if my experience is anything to go by, I'm not sur-

prised that more and more people are buying foreign cars.

Mechanically, my new Vauxhall Chevette GLS hatchback is not too bad, though I have had quite a lot of trouble with it, especially from oil leaks and an inability to start when cold. But the bodywork is *dreadful*—the paint is so thin that I can almost rub it off, and the finish is very poor.

I'd had the car only a week when I discovered the first area of rust, and, three months later, there was more than there had been on my five-year-old Austin 1300 when I sold it.

The car also let in water badly at the rear and on the driver's side

at the front: when I was driving in heavy rain, my feet got wet and the carpet at the front and rear was almost always saturated.

If it had been anything other than a car, I would have returned the article to the shop where I had bought it, and asked for it to be replaced.

Mrs R M Gibson
Luton, Kent

Tolled off

You may be right in arguing against tolls ('You pays your money', November–December), though other countries operate them. But when you quote a car owner from Croydon, even

though a widow on a fixed income, as saying that a rise to possibly 45p in the Dartford Tunnel toll—currently 25p, and raised from 12½p in 1976—will *seriously limit* the number of times that she can afford to visit her daughters in Essex, you really are producing a pretty feeble case.

J E Genders
Ruislip, Middx

We try harder

I agree that vandalism and security in general are real headaches in carparks (DRIVE, Jan–Feb), but we at Avis Parking are making serious efforts to deal with

continued on page 64

SECONDHAND REVIEW

continued from page 38

fitted out and had obviously been cared-for—engine, tyres, upholstery. I couldn't fault it; there wasn't even any sign of rust.

'My work entails driving about 15,000 miles a year, so I need a car that's comfortable. Apart from that, my wife and I—our daughter has grown up, now—like to visit relatives, all of whom seem to live 100 miles away.

'It may have been a futile gesture, but I asked the dealer if the mileage was genuine. By way of an answer, he waved a piece of paper in front of my nose that had been signed by the previous owner which verified the figure, but I can't believe it was worth much...

'I did cast an eye over some other cars, in particular a 1976 Renault 5TL at £1479 in excellent condition. But it was poky inside, and the driving position seemed awkward. I felt as though I were sitting on top of the controls.

'I also looked at a P-registered Simca 1100GLS, at £1475, which I felt was underpowered: I do like being able to get up hills without too much bother. Back-seat accommodation seemed cramped, too.

'Finally I turned to a Mini 850, but again it was too small. The dealer tried to be honest, and pointed out signs of rust on the door sills, but that finished me. Once rust appears, it's the beginning of the end.'

Second opinion

Dave's Dolomite had undergone a respray, but our engineer felt that, almost certainly, this had been done for cosmetic reasons as there was no evidence to suggest major accident damage.

There were, however, a few dents and scratches, a small area on the offside front wing had been filled before getting the spraygun treatment, and many seam joints had surface rust.

The car had been recently serviced, and it seemed that maintenance had not been neglected—for instance, the car had new front brake pads and dampers. The occasional puff of blue exhaust smoke was noted during the road test, particularly when accelerating after over-running, but it was not unacceptable for the mileage.

Although smothered in grimy oil, the

engine was not leaking significantly, and only a cracked top hose and loose fanbelt needed attention.

While the four Michelin radial-ply tyres were all legal, the spare—of a different make—was due for retirement, and slight play in a steering lower swivel joint had 'feathered' the nearside front tyre.

Suspension and underbody protection were holding up, but our expert suspected that the exhaust pipe was about to blow. More important, the passenger's seat-belt needed re-fixing as its mounting was upside-down.

Overall, a typical five-year-old Dolomite ... and not a bad buy.

Angry Susan, and the things dealers say

Susan Gratton, 22, a Birmingham secretary, ought to know a few tricks of the trade: she works for a car dealer. Certainly, she was determined to haggle over the price of her choice, with every dent and defect the AA found being worth a few pounds off.

She first decided to go for a 13,000-mile Reliant Kitten, registered in February 1976 and priced at £1325. To Susan, its attractions were obvious: no rust problems with its glass-reinforced plastic body; economy and comfort, too. The dealer fell over himself to be helpful, and seemed happy about the AA inspection—until we rang to make the appointment. By then, he had changed his tune, saying that there could be no inspection unless Susan put down a non-returnable deposit of £60.

Angry, Susan went back to the garage. No one had mentioned £60 to her, and they were not going to now...

The dealer maintained that it cost him £60 to take any car off the sales forecourt while the AA was carrying out an inspection. Believe that, thought Susan, and you'll believe anything, so she moved on to choose a 1976 Austin Allegro 1300 deluxe at £1599.

'It was tucked away in a corner, and the dealer admitted that he'd had it for six months. From a distance, it looked good. Close-up, however, there was some cracking round the nose—I thought it was filler. The garage said it would see to it, and to all the rust spots I pointed out on the

bonnet and by the boot lock. They weren't too serious, but without attention they would spread.

'I wasn't over-keen on the plastic upholstery, considering that the car was a deluxe model. I thought it looked very cheap. But the engine appeared well cared-for, with no signs of oil leaks, so I thought the car would make a good replacement for my 1968 Hillman Imp.'

Second opinion

Despite its modest 31,000 miles, the Allegro was not a good example of the model, and needed essential repairs that could well be costly. Our expert was certain that it had been in an accident as, apart from the areas of filler Susan found, there were patches on the rear valance, nearside rear wheelarch, roof and the bonnet... all with a poor paint finish.

Body rust patches were isolated but deep-rooted, particularly those on the boot lid below the lock and in the rear valance below the numberplate. In fact, the list of body faults went on and on, exasperating our engineer and earning the verdict: 'Overall body and paint condition is quite a long way below average.'

A courtesy-light switch did not work and the headlamp dip beam was out of action, along with the numberplate light and an offside front indicator. Two of the four radial-ply tyres were well worn, and the spare wheel was missing altogether.

Suspension checks revealed swivel joints at the front requiring attention, and more problems with suspension mountings at the back. The exhaust pipe was heavily corroded in places and would need replacing before long. Second-gear synchromesh action was weak—a potentially expensive repair.

Braving a road test, our engineer diagnosed the need for balancing of all wheels, and the correction of a steering bias to the nearside.

Susan's reaction? 'A diabolical car—especially considering the sort of money they were asking for it. I know the garage told me they'd iron out all the faults, but I shouldn't think they'd have known where to start on the AA's list.'

'There just wasn't anything right about it really, was there?' ROBERT OXFORD



USED-CAR PRICE GUIDE

Countdown to rip-off

Recent interest in 'clocking'—reducing the mileage recorded on the odometer to put up the price of a secondhand car—prompted an AA patrol to tell DRIVE about a classic example of that other game, 'zeroing'—turning back the mileage to nil, and slapping on a sticker stating that this has been done because the dealer cannot guarantee the mileage and does not want to be prosecuted under the Trades Description Act.

Patrol Charles Gethin asks: 'Why can't they leave speedo readings as they are, then stick on their disclaimer labels?'

Gethin cites a case involving a dealer who left a purple, R-registered Ford Capri at a body-repair shop while he was there: 'The interior was rotten—the headlining, carpets and upholstery were filthy, and the foot control rubbers were worn through to the metal. Outside, it looked as if the car had never been cleaned in its life; the door sills were scraped bare and rusty; and the driver's door made the ominous creaking of flexing metal.'

'The engine was an absolute disgrace—oil and filth covered everything. In fact, it was a typical example of a hire-company car that had taken a real hammering.' The reading on the speedo was on the wrong side of 70,000.

A few days later, our man had occasion to visit the dealer... and there, beneath a banner that read 'Bargain of the Week', was the purple Capri—sparkling as new, with new carpets, pedal rubbers and tyres, and its bonnet raised to reveal a beautifully steam-cleaned engine, all for the giveaway price of £1995. And the odometer reading stood at a nice round figure of six zeros, with that little sticky label attached.

But if you really cannot live without that shiny car with the zeroed clock, first get the advice of a qualified engineer. Ten minutes of his time with a compression tester should reveal something of the truth... You then have some evidence with which to start haggling, using our price list of 100 of today's most popular secondhand models in the UK as a guide. Specifications are compiled from AA road-test reports, the reference numbers and issue dates of which are shown in the table.

MAKE AND MODEL	E latest new price	AA Road Test Report No	Date	engine cc	mean top mph	acceleration 0-60 in sec	overall mpg	insurance group	MODEL YEAR						
									1978	1977	1976	1975	1974	1973	1972
Alfa Romeo Alfásud SE	S	354	9/74	1186	92	16.1	32.5	4	2540	2135	1765	1450	1175	—	—
Audi 80 L	S	389	6/76	1297	91	14.2	31.75	5	—	2875	2320	1860	1490	1165	—
Audi 100 LS	S	314/RI 139	19/75	1761	100	12.7	29.25	5	—	—	2550	2105	1735	1340	1090
BMW 1602 Lux	D	363	1/75	1573	94	14.4	29.0	6	—	—	2480	2055	1885	—	1190
BMW 520 i	S	327	12/73	1990	111	9.7	29.0	S/R	—	5695	4705	3790	3020	2380	—
Chrysler Imp de luxe	D	258	9/71	875	78	20.0	36.0	1	—	—	1155	995	850	720	610
Avenger 1300 2-door	S	337	4/74	1295	83	19.0	30.5	2	2455	2095	1540	1320	1120	—	—
Avenger 1600 GLS auto	3963	339	5/74	1600	93	13.9	28.5	4	3095	2665	2045	1740	1470	—	—
Alpine S GL	3921	381	4/76	1442	97	14.3	32.0	5	3180	2835	2410	—	—	—	—
Hunter GL 4-door	S	234	1/71	1725	86.5	15.0	28.7	3	—	—	1815	1545	1320	1105	930
Sceptre Mk3 auto	D	169	10/68	1725	97	14.1	28.6	4	—	—	2100	1785	1500	1260	1045
Chrysler 2litre auto	4700	308	5/73	1981	102	13.2	24.0	5	3665	3070	2180	1785	1415	1115	—
Simca 1100GLS 5-door	2761	298	1/73	1118	85	16.5	33.25	3	2230	1810	1535	1300	1085	915	755
Citroen 2CV6	1853	RI 118	19/75	602	66	37.2	44.0	1	1495	1260	1060	895	—	—	—
Citroen Dyane 6	2049	366	3/75	602	70	29.5	47.0	1	1595	1350	1100	925	765	640	525
Citroen GS1220 Club	3249	384	5/76	1222	93	17.2	33.0	4	2255	2065	1535	1260	1020	830	660
Citroen CX2000	5097	416	5/77	1985	107	12.7	29.25	6/7	4010	3295	2675	2280	—	—	—
Colt Lancer 1400 GL 4-door	3399	371	11/76	1439	94	12.9	34.0	5	2525	2095	1725	—	—	—	—
Daf 66SL	D	317	9/73	1108	79	23.5	29.0	3	—	—	—	1065	905	765	—
Datsun Cherry 100A 4-door	S	284	8/72	988	83	17.7	41.25	3	—	—	1625	1395	1190	1010	850
Datsun 120Y coupé	D	336	3/74	1171	86	17.7	39.0	4	2400	2210	1895	1610	1365	—	—
Datsun Violet 140J	2877	RI 132M	19/75	1428	94	15.5	32.0	4	2570	2075	1845	1490	1250	—	—
Datsun Bluebird 180B	3257	316	8/73	1770	104	12.3	27.0	5	—	2195	1870	1580	1330	1115	925
Fiat 126	1714	334/RI 138	2/74	594	62	60.0	49.5	1	1380	1190	1030	895	765	655	—
Fiat 127 3-door	S	RI 137M	19/75	903	82	18.4	41.75	2	2010	1880	1430	1220	1030	880	—
Fiat 128 4-door	2835	320	9/73	1116	86	15.5	34.0	3	2075	1735	1480	1260	1065	900	755
Fiat 131 1600S	3550	369	6/75	1585	94	13.6	32.0	5	2695	2390	2200	1705	—	—	—
Fiat 132 1800GLS	D	360	1/75	1756	102	12	25.0	6	—	—	2030	1665	1500	—	—
Ford Fiesta 1000	2362	417	4/77	957	83	18.4	41.0	1	2070	1925	—	—	—	—	—
Ford Popular 1.1	2364	RI 136M	19/75	1097	77	23.6	35.0	1	1940	1785	1535	1325	—	—	—
Escort 1300XL 4-door	S	292	11/72	1297	88	16.0	31.0	2	—	—	—	1495	1290	1100	940
Cortina Mk3 1600XL 4-door	S	323	10/73	1593	95	15.1	27.0	3	—	—	1965	1685	1435	1225	1030
Cortina 2000E Estate	S	347/RI 116	19/74	1993	99	12.3	27.5	5	—	—	2605	2180	—	—	—
Capri MkII 1600GT	S	342	6/74	1593	102	12.4	27.5	5	—	2945	2515	2170	1945	—	—
Capri 3000 Ghia auto	S	RI 114	19/74	2994	113	9.9	22.0	6/7	—	4320	3625	3040	2645	—	—
Granada 3000 GXL auto	S	282	6/72	2994	108	11.7	21.0	6	—	—	—	2575	1985	1490	1040
Honda Civic 1200 3-door	2745	362	3/75	1469	86	14.7	34.75	4	—	1915	1625	1380	1160	—	—
Honda Accord auto	4175	420	5/77	1600	89	14.7	32.0	5/6	3430	2885	—	—	—	—	—
Lada 1200	2056	355	9/74	1198	91	15.0	33.25	3	1650	1400	1180	990	825	—	—
BL Mini 850	2157	340	5/74	848	73	26.1	41.0	1	1780	1530	1325	1050	905	770	655
Mini Clubman Saloon	2537	410	1/77	1098	82	18.2	40.5	1/2	2130	1840	1585	1285	1095	945	805
1300 Mk2/3 4-door	D	239	2/71	1275	87.5	17.2	36.5	2	—	—	—	—	1075	925	780
Allegro 1300 Mk1	S	329	1/74	1275	86	16.0	34.75	2	—	—	—	1460	1230	1030	—
Allegro 1300 Mk2 4-door	3021	377	2/76	1275	85	19.0	37	2	2500	2150	1815	—	—	—	—
Allegro 1500 Estate	3324	RI 127M	19/75	1485	90	16.6	34.25	3	2860	2450	2120	1785	—	—	—
Maxi 1750 Mk2	3621	263	1/72	1748	90	14.6	28.75	3	2885	2480	2035	1730	—	—	—
Princess 1800HL	S	397	8/76	1798	96	14.2	29.75	4	—	2595	2140	1855	—	—	—
Princess 2200HL	4599	RI 129N	19/75	2227	105	12.7	26.5	4	3190	2675	2155	—	—	—	—
Marina Mk2 1.3 4-door	3163	392	7/76	1275	85	18.2	33.0	2	—	—	—	1565	1325	1110	930
Marina Mk1 1.8 4-door	S	295	1/73	1798	96	12.8	31.5	3	—	—	—	—	1370	1150	960
MG Midget Mk3	S	205	2/70	1275	93	14.8	29.1	4	—	—	—	—	1235	1040	880
MGB Mk2/3	3996	243	4/71	1798	105	11.8	23.9	6	3270	2850	2405	2030	1685	1415	1190
Jaguar XJ6 4.2	S	227	10/70	4235	117	10.0	16.75	6/7	—	—	—	—	3890	2380	1985
Jaguar XJ12(L)	13,430	305	4/73	5343	136	7.6	13.0	7	—	—	—	4655	3765	2330	—
Rover 2200SC	D	324	11/73	2205	104	12.2	24.0	4	—	3640	2975	2455	2030	—	—
Rover 3500 auto	S	330	2/74	3528	112	11.1	20.5	5	—	—	3490	2775	2280	1760	1415
Range Rover	9815	252	7/71	3528	101	13.2	18.0	5	—	8490	7525	6240	5000	4160	3420
Triumph Toledo 4-door (Dolomite)	3265	345/RI 150	19/77	1296	83	19.8	33.0	2/3	2640	2325	1985	1435	1230	1055	950
Triumph Dolomite 1850	4435	288	9/72	1854	100	11.4	28.25	4	—	—	2305	1935	1635	1365	1140
Triumph 2000 Mk2	D	219	6/70	1998	95	15.0	26.0	4	—	—	—	2230	1960	1390	1140
Triumph 2500 TC	D	RI 112	19/74	2498	101	11.5	27.0	5	—	3565	2925	2355	2005	—	—
Triumph Spitfire 1500	3365	376	2/76	1493	97	12.5	35.25	5	2675	2360	1985	1665	—	—	—
Triumph Stag	D	273	3/72	2997	118	10.2	22.5	S/R	—	5225	4285	3490	2825	2280	1840
Triumph TR7	4764	401	11/76	1998	108	10.2	28.75	6	3665	2925	2480	—	—	—	—
Mazda 1000 2-door	D	343	6/74	985	78	20.0	33.5	3	—	1490	1270	1075	915	—	—
Opel Kadett S estate 3-door	3195	338	5/74	1196	84	16.7	32.0	4	2565	2235	1910	1620	1365	1010	845
Opel Ascona 1.9SR	S	302	3/73	1897	96	12.3	25.5	6	—	—	—	1905	1535	1220	—
Opel Rekord 4-door	S	287	8/72	1897	101	12.0	26.0	4	—	—	—	1835	1510	1265	1090
Peugeot 104 4-door (GL)	2539	325	11/73	954	84	17.3	36.5	3	—	—	1600	1375	1165	1000	—
Peugeot 304	S	386	5/76	1290	92	16.7	35.5	3	—	—	1980	1660	1390	1165	965
Peugeot 504GL	4486	RI 140	19/76	1971	99	13.7	27.75	5	3740	3295	2775	2280	1885	—	—
Peugeot 504 estate	4902	275	4/72	1971	98.5	13.8	24.5	5	4360	3865	3270	2725	2280	1910	1560
Reliant Scimitar GTE	7014	303	3/73	2994	118	9.1	21.25	7	6315	5300	4360	3445	2850	2380	1960
Renault 4TL	2422	RI 121	19/75	845	74	26.4	39.0	1	1995	1705	1460	—	—	—	—
Renault 5TL	2640	349	8/74	956	85	19.7	42.0	2	2270	1945	1655	1415	1200	1005	—
Renault 5TS	3187	370	11/75	1289	93	13.3	36.25	4	2620	2250	1925	1635	—	—	—
Renault 6TL (1100)	2934	364	3/75	1108	82	17.9	37.75	3	2340	2000	1710	1455	1230	—	—
Renault 12L	S	385	5/76	1289	82	18.1	34.5	3	3265	2015	1745	1505			

these and other problems without increasing costs to our customers. We are also trying to make parking as efficient and convenient as possible, and have colour-coded floor levels and simple-but-dramatic signs in use in some of our 28 locations.

I was particularly interested in your comments about the Whitcomb Street Garage, which is no ordinary carpark. Situated in the heart of London, it attracts more than its share of vagrants and undesirables, but we hope shortly to introduce extra security measures there. Your readers may be interested to know that the carpark is never 'almost always full of season-ticket holders' in the daytime. At the last count, there were in fact only 56.

W J N Elliott
General Manager
Avis Parking
Hayes, Middx

Express delivery

I am surprised that no mention has ever been made in DRIVE of the shocking way in which new cars are delivered. Several times recently I have been overtaken at high speed by brand-new cars carrying trade plates and still with their wax coating on.

On the A38, between Exeter and Plymouth, I was passed at 70mph by a Ford Fiesta 957L, which has a top speed of only just over

80mph. I can only assume that it was being driven 'flat out', and perhaps this is a reason why many new cars have problems.

I feel very strongly that car-delivery organisations, and manufacturers themselves, have been getting away with this bad practice for too long.

Roy Lusted
Havant, Hants

DRIVE would like to hear of other, specific instances of this practice.

Good ferries

At this hospital, we are constantly in need of car owner-drivers prepared to transport children to or from clinics, or supplies such as human milk from one hospital to another—jobs that cannot always be covered by ambulances.

If your readers feel that they may be able to help from time to time (and we always try to give several days' notice), please contact the Voluntary Help Department—tel 01-405 9200 ext 309.

Our only demand is that drivers have a clean licence, live in Greater London and can be contacted by phone. Normal insurance cover is usually adequate, and we reimburse all petrol costs.

Robert P Pike
Assistant Voluntary Help
Organiser
Hospital for Sick Children
Great Ormond St
London WC1



LEGAL

Not guilty!

JUNE KELLY, a 25-year-old student teacher, breathed a sigh of relief when a neighbour in a Vauxhall Viva pulled alongside and offered her a lift. She hardly knew the chap, but it was a long walk home.

She jumped in without a second thought; the last thing that might have crossed her mind was that she could be breaking the law. But the truth was that the kindly Viva driver hadn't ever bothered to take a driving test, and was not sporting L-plates.

As June's luck would have it, it was on that journey that he was caught. And, when police stopped him and warned him of intended prosecution for the offence, June, as a qualified driver at his side, was charged with aiding and abetting him. In due course, she pleaded guilty and was given a £10 fine plus an endorsement... and only chance brought the

incident to the notice of the AA.

Head Office legal manager Jack Smith takes up the story: 'We realised that we could sort this one out because June had not had a guilty mind—what the law calls *mens rea*. We made an application to the court within the 21-day time limit, and the magistrates set the conviction aside...'

Forehand knowledge is a crucial point of law—lack of it doesn't automatically make you innocent in fact, if an offence involves something about which you *should* have known, your ignorance could be culpable.

As Jack Smith knows, however, there are thousands of ways for motorists to break the law in all innocence... and even the police don't always know best!

A PC recently telephoned DRIVE asking us to warn qualified drivers that they risked prosecution if they displayed L-plates. 'The only qualified driver who can drive with an L-plate up, is a professional instructor,' he maintained. He estimated that one in 50 drivers on his 'patch' were guilty, and that their conduct was unfair to the rest of the motoring public.

Unfair, perhaps. But—illegal? The AA's lawyers cannot agree, unless his patch happens to be in N Ireland. For they can find no British law against leaving L-plates on your car for as long as you like.

AA

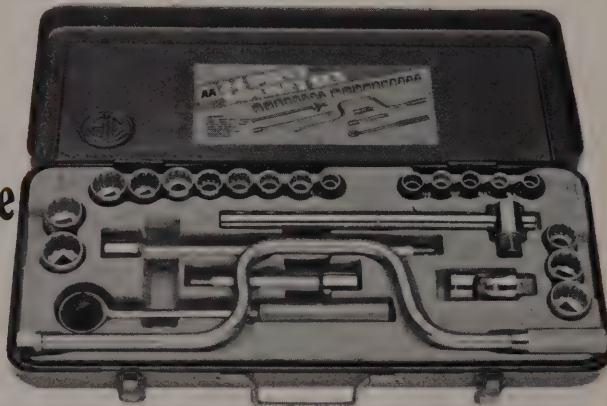
How much do you care about your car?

It may be a gleaming new model straight off the production line—or an ageing reminder of happy motoring in the past. But if you care about it—there's one thing you should do. Look in the boot. Check your tool kit, and make sure you're prepared to do more than just change a tyre.

Be prepared. With one of the AA's Tool Kits. Essential for every motorist—not just the enthusiast. Take your pick, from the superb 24 Piece Socket Set or the simple, yet carefully thought out Motorist's Tool Roll—or even take both! It makes sense.

AA

24 piece Socket Set



Get at those nuts where a spanner can't reach. The comprehensive set contains 18 x 1/2" square drive sockets (10 A/F 3/8", 7/8", 1" sizes and 8 metric 10-22mm sizes), a reversible ratchet, speeder handle, sliding tee-bar, 5" and 10" extension and a universal joint.

£20.95 inc. p&p
or if you prefer
5 monthly payments of £4.19

NOTE: APPROVAL AND CREDIT FACILITIES ONLY APPLY TO AA MEMBERS. Non-Members should enclose full payment with order.

AA

Motorist's Tool Roll

The handy collection comprises set of 6 combination spanners in A/F or Metric, engineers screwdriver, and crosspoint Phillips model, insulated combination pliers, multi-grip pliers, ten blade feeler gauge, sparking plug socket. Tools are visible in the wipe clean PVC roll. Pockets to keep screws etc. safe, and hand cleansing tissues too.

£9.95 post free
or if you prefer 5 monthly payments of £1.99

Send your order today to:
AA Mail Order Dept., P.O. Box 50, Basingstoke, Hants, RG21 2EA.

Name

Address

Signed (I am over 18) Orders without a signature cannot be accepted

Offer applies to U.K. only. The AA confirms that it will hold prices until 1/9/79 subject to changes in VAT. Please enter your membership number here

Membership no : 794 ;

Item required	Price	Ref. No.	Qty.
24 Piece Socket Set	£20.95	75051	;
Motorist's Tool Roll A/F	£9.95	76209	;
Motorist's Tool Roll Metric	£9.95	76212	;

For office use only

Skip out

To appreciate the P3's superb wet grip take a run around the block.

Two steel belts plus a nylon belt

An important part of the P3's special construction which gives phenomenal roadholding with extra high mileage and greater driver comfort.

Unique tread pattern

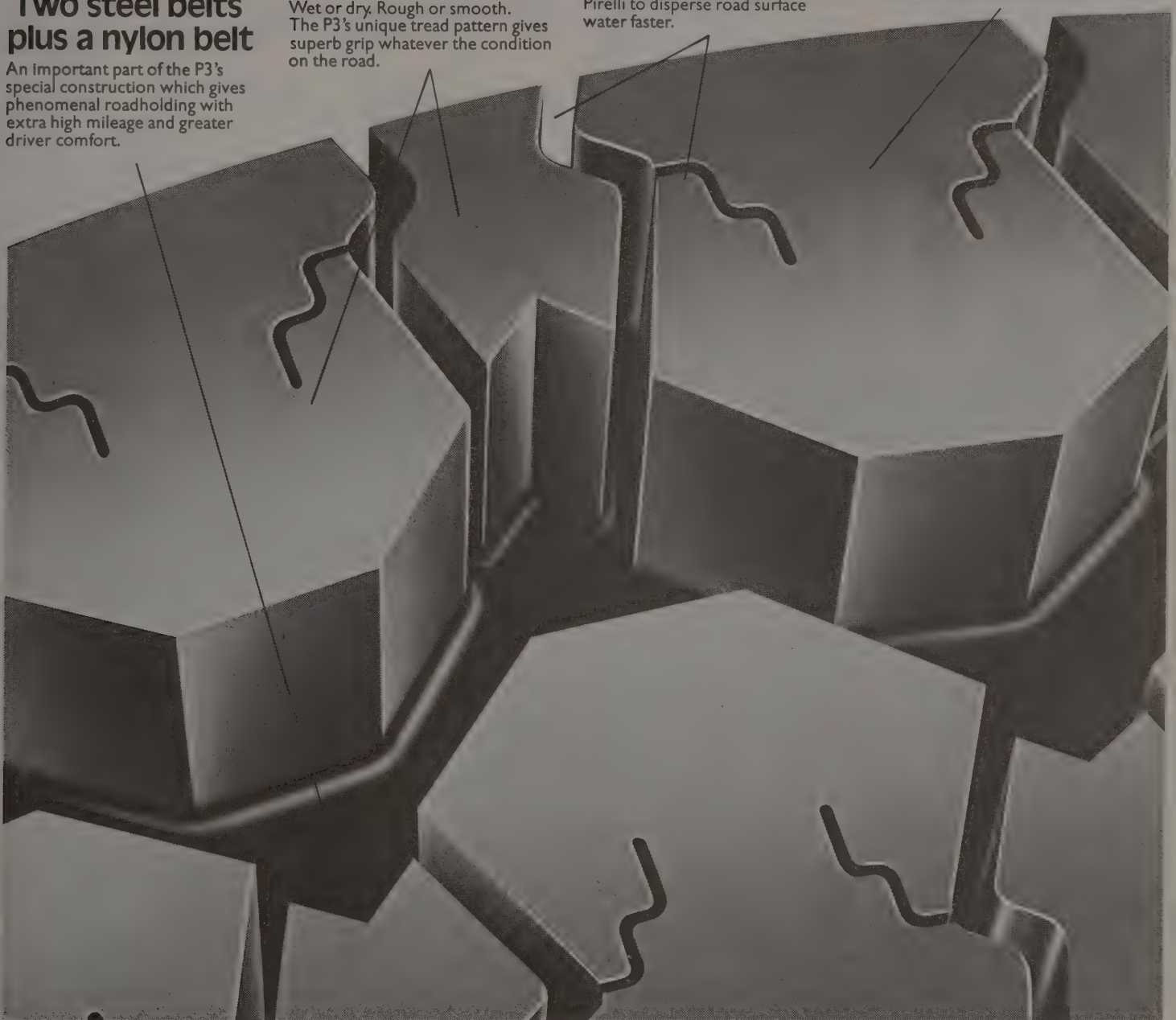
Wet or dry. Rough or smooth. The P3's unique tread pattern gives superb grip whatever the condition on the road.

Complex channels and sipes

A design specially developed by Pirelli to disperse road surface water faster.

Tetramix Compound

Pirelli's latest tread compound that gives outstanding grip throughout its long life.



Take a run round some of our competitors' blocks and we think you'd be a little disappointed.

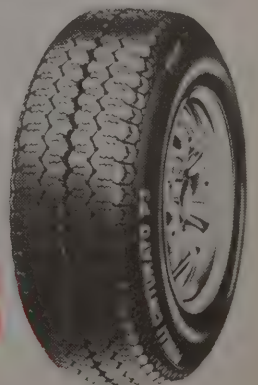
Only Pirelli offer you all the points at the top of this ad.

Choose a rainy day and take a run in a car fitted with P3s. Experience the outstanding wet grip and the greater driver comfort for yourself.

As for high mileage, well if you've got the time P3's got the mileage to lap the block thousands and thousands of times.

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The best tyre for you on a dicey road.



There are AP Lockheed pads, shoes, fluid, hoses, cylinders, for virtually every vehicle on the road.

Which means you should be able to get absolutely everything you'll ever need from Lockheed. Full stop.

LOCKHEED. FULL STOP.



Automotive Products Ltd., Parts and Service Division, Banbury, Oxfordshire.

DRIVE

AA

May-June 1979 50p

the motoring magazine
that's so different



See page 32



What do YOU know
about driving?
test yourself:
page 15

If you want to do Europe under your own steam, spend the first day under ours.



If you're going to drive around the Continent, start your holiday with Olau. From Sheerness, off the M2, we'll take you to Vlissingen (Flushing) in Holland, where you'll be right on one of the main motorways of Europe. So that you're at destinations in Germany and central Europe faster.

You'll sail across the Channel on one of our comfortable ships and you'll have time to relax on the way. Dine in the restaurant and sample continental delicacies like our Scandinavian Smørgasbord. Drink at the bar. Dance to the music or take to your cabin. Wander up on deck or play the tables below.

While you're on board, our time is your time, so when



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We give you a good time crossing.

you arrive on the other side, you're raring to go. Go by day for a good time. Go by night for a quiet time.

Whether you're driving, or travelling without your car, start your holiday with Olau. We'll take you comfortably. Twice a day. At 11.00 and at 21.30. And in the off-peak season you can even **SAVE 50%** on the cost of your car, if you take the day-time sailing.

For information and reservations, ask your local travel agent for a brochure, contact your motoring organisation, or ring Olau direct on Sheerness (07956) 4981. Or write to Olau-Line Terminal, Sheerness, Kent, ME12 1SN. If you would like an Olau brochure sent to you free of charge, please fill in the coupon below and post to Olau direct.

Please send me the current Olau brochure.

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Cover story, page 32; Chrysler Horizon GL test report, page 44

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Member of the Audit Bureau of Circulations

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CHANGES, this time, to our car-test reports, which we believe you will approve and find helpful. For starters, we're running *individual* reports, instead of grouping them in threes; though, if you wish, you can still pair this issue's half-dozen, as has our Everyman Panel—the Alfasud Sprint with the Volkswagen Scirocco, the Citroen GS estate with the Chrysler Horizon, and the Mazda 1400 estate with the Austin Allegro estate. We're also introducing a useful-we-hope, at-a-glance rating for each car: turn to the first, on page 16, and you'll get the idea immediately.

Also new, and to become a regular

feature of the mag, is our own exhaustive list of new-car *on-the-road* prices. It runs across pages 4-6, and it is of course complementary to the familiar run-down of used-car prices (page 63) that you tell us you find so valuable.

Adds and alts, too, to Secondhand Review (page 48), where, with Computacar's help, we monitor North and South searches for Daimler/Jaguar XJ splendor; and to DRIVE's Long Term Test Club (page 26), where a Volvo 244DL comes in for year-long scrutiny, and readers recount their own experiences with the model as we sign-off our long-term Austin

Allegro 1300 Super at 9757 miles.

And, still on cars, confusion this time around for DRIVE's female cover-watchers, who claim that our male chauvinism is getting a wee bit predictable and felt sure that this issue's cover lady would surely be reduced to a bikini, or less. Predictable only in our enthusiasm for ladies, we therefore insisted on lots of clothes—plus a very angry look on a very pretty face, to lure you to page 32 and Jim Bush's report on aggressive behaviour among drivers.

Don't miss, either, the aches and pains of pages 38-39, where Roy Johnstone writes about agony-

making car seats; nor the moans and groans of page 36, where Mike Hill goes for brokers. And be sure to mutter and mumble and sigh over our double-quiz on pages 14-15, where we invite you, for no spectacular reward whatsoever, to prove to yourself that you're perhaps not such a wonderful driver.

All this and more—including a summer-snapping super-camera Special Offer on page 50—between the covers of this issue. And, naturally, lots more all over again in the *next* DRIVE, on sale 28 June.

— the Editor

A long road . . .

We love to say that we told you so, so . . . The dire consequences of what might happen to Britain's roads if Whitehall continued to force down the level of local-authority spending on maintenance was spelled out by DRIVE last summer. In the wake of one of the worst winters on record, the chickens have come home to roost, and it can be small consolation to Kent County Council surveyor Allan Smith that the forecast he made, in July 1978, is now on the way to becoming fact. 'No one,' he told DRIVE, 'can say when or whether there will be a catastrophic collapse of large sections of our road system. A hard winter of the 1962-1963 type may well precipitate this . . .'

According to the British Road Federation, roads in some areas are now in a worse state than ever. Last winter's snow and ice, it says, led to a serious break-up of surfaces, and local authorities are facing an estimated £125million bill to cover their snow-clearance efforts and essential repairs.

Although the government has said that it will 'consider favourably' any financial SOS from the

county councils, it is clear that even those who can take advantage of the offer will have to dig deeply into their maintenance budgets and shelve an already-mountainous backlog of work.

Says James Ireland, chairman of Bucks County Council and of the Association of County Councils' planning and transportation committee: 'With the rates and

transport-support grant from the government already fixed, we shall need more money next year because of the bad winter. The amount that Whitehall has been underspending on trunk roads should be released at once to help local authorities, regardless of whether they qualify for the government's weather gesture.'

Through a combination of main-



'You and your damned sheepskin seat covers!'

tenance neglect and weather damage, many roads are crumbling under the pounding from heavy lorries, and two local authorities—Berkshire County and West Yorkshire Metropolitan Councils—have banned trucks over 5ton from certain routes. Now that the precedent has been set, Mr Ireland expects others to follow suit.

Dealer always wins

As DRIVE goes to press, car dealers are congregating in London for a two-day teach-in on motor-trade law from Greville Janner QC, MP for Leicester West. Item 2 on the agenda makes particularly interesting reading: 'The making of a contract—its essentials, including how to hold others to your contracts and *how yourself to find loopholes*' (our italics).

Secondhand rows

Faithful readers will recall that it was DRIVE, in 1976, that pointed out that sports mopeds were often far too powerful for the under-17 youngsters allowed to ride them. Little did we think, then, that we would be contributing to a booming secondhand market—and we can't say we're happy about it.

Some 18 months after DRIVE's
continued on page 7

Protected Eagles No.1

White Tailed Sea Eagle

Extinct in the United Kingdom by 1916. Re-introduced in 1977.

Main habitats Scandinavia and Asia.

Fourth largest eagle in the world, with a wing span of 7-8 feet.

Like all eagles it is a protected bird.



With 160 U.K. branches you can rely on our
countrywide insurance service for your protection. Millions do.

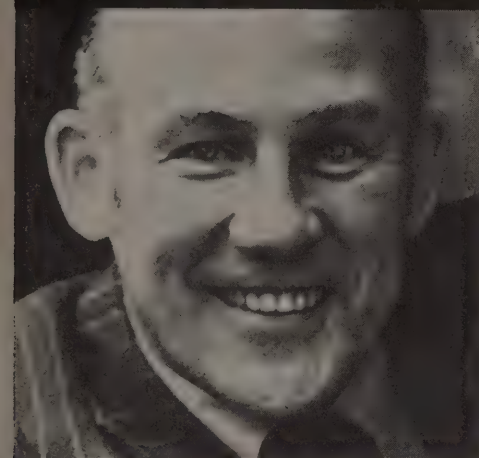
Ask your broker or call in at your nearest branch.



Eagle Star Insurance

"Protectol Rustproofing? If it wasn't good, you wouldn't catch me saying it was!"

Stirling Moss



The technicians are highly trained. The stations have the AA Seal of Approval and you can't go better than that!

Okay, I thought, that's fine for Protectol. But what about the customers and their cars?

'Well - they benefit, naturally. That's what good rustproofing's all about. Look at our Gold Seal system. It has a 12 year guarantee - the longest on the market; and our Standard system has a 6 year guarantee. Both are transferable and have clauses without catches. They have to, to meet the AA's Seal of Approval requirements. We don't mess about you know.'

So they weren't just another rustproofing system, I suggested.

'You bet we're not. In fact Protectol pioneered modern clean vehicle rustproofing in Britain.'

So I asked them why I hadn't heard more about them before?

'Because we didn't have Stirling Moss to sell Protectol.'

That did it. From now on I'll be telling you a lot more about Protectol and Gold Seal Rustproofing.



Because if it wasn't good - you wouldn't catch me saying it was!"

Stirling Moss
Stirling Moss.

"When Protectol came along and asked me to help them sell their rustproofing, I started thinking of the nicest way to say 'No'. But they were very enthusiastic about bringing more motorists the benefits of their system, and really wanted to get the message across. Naturally I became curious. So I asked them what it had going for it.

'It's the best in Britain,' they said, 'because we've developed it far in advance of earlier methods - using modern laboratory and simulated weather tests in the UK and abroad.'

The application is very thorough, the products are non-drip and cleanly applied.

If you'd like to know more before you read our next Stirling Moss advertisement, send this coupon for details of Protectol Rustproofing and the address of your nearest station (there are almost 100 Protectol Stations - check in your local Yellow Pages). You don't need a stamp.

Name

Address

Tel.

Send to: FREEPOST,
Protectol (Rustproofing) Ltd.,
Commercial Yard, Galgate, Barnard Castle,
Co. Durham DL12 8BG.
Tel: Teesdale (0833) 38638/37752.



What's it called? How much does it cost? DRIVE's superguide to the latest prices of new cars currently available in Britain starts here. And the prices that we quote are not the notional sums that the showroom salesman will confess to: if you want the new Dingbat 3000GXL sitting outside your door, you can't have it without seatbelts, numberplates, road-fund licence and probably delivery charges, too. So DRIVE's figures ignore the showroom prices and tell you how much it will cost to put your new car *on the road*... whether the salesman likes it that way or not. What more do you need to know? Well, if the car has a road-test report number in the final column, write to DRIVE New-car Price-guide, Fanum House, Basingstoke, Hants, RG21 2EA—and we'll send you a free copy of the best road tests in the business.

(a) denotes road test on automatic model only; delivery charges where applicable estimated on an average 200 miles

	Manual	Auto	AA Road Test
AC			
3000ME	11444	—	
ALFA ROMEO (150 dealers)			
Alfasud Super			
1.3 (1286cc)	3130	—	
Super 1.3 (1350cc)	3249	—	
Super 1.5	3399	—	
Ti 1.5	3650	—	
Sprint 1.5	4549	—	D6/79
Giulietta 1.6	4549	—	
Alfetta GT 1.6	5049	—	
GTS	5550	—	
2000L	5449	—	
GTV2000	6040	—	
GTV Strada	7549	—	
ASTON MARTIN (24 dealers)			
V8	27094	27094	
V8 Vantage	29693	—	
V8 Volante	—	32715	
Lagonda	33959	33959	
AUDI (342 dealers)			
80LS	4765	5058	
GLS	5315	5608	
100 Avant L	5455	5915	
L 5S	5905	6398	RI176
GL 5S	6400	6893	RI176
Avant GL 5S	6660	7153	RI176
GL 5E	7055	7548	D8/78(a)
CD 5E	—	8700	D8/78(a)
Avant CD 5E	—	9005	
AUSTIN MORRIS (1900 dealers)			
Mini 850	2273	—	RTR340
1000	2393	2758	D3/78
Clubman (1098cc)	2652	—	D3/78
Clubman (998cc)	—	3017	
Clubman estate (1098cc)	2858	—	
estate (998cc)	—	3223	
1275GT	2969	—	
Allegro 1100DL	2716	—	
4dr	2819	—	
1300S 2dr	3033	3398	
4dr	3136	3501	RTR377
1300S estate	3314	3679	

1500S 4dr	3235	3600	
1500SP 4dr	3574	3939	
1500S estate	3439	3804	D5/79
1750HL 4dr	3785	—	
Vanden Plas 1500 4dr	4296	4661	
Marina 1300 4dr	2962	—	
1300L 2dr	2083	—	
4dr	3194	—	
1300HL 4dr	3278	3608	RTR392
1300 estate	3616	3946	
1700 4dr	3500	—	
1700L 4dr	3317	—	
1700L 4dr	3527	3857	
1700HL 4dr	3890	4220	D4/79
1700 estate	3669	—	
1700L estate	3917	4247	
Maxi 1500	3643	—	RTR263
1750	3797	4187	
1750HL	4006	4396	
1750HLS	4112	—	
Princess 1700L	3897	4309	
1700HL	4184	4596	
2000HL	4370	4782	
2200HL	4715	5127	D11/78
2200HLS	5239	5651	
BENTLEY (35 dealers)			
T2 Series	—	32,173	
Corniche	—	46,720	
Convertible	—	49,629	
BMW (150 dealers)			
316	4849	—	RI149
320	6099	6509	RI149
323i	6949	—	
518	6249	—	
520	7299	7709	D11/78
525	8349	8802	
528i	9499	9952	
633CSi	—	16399	
635CSi	17599	—	
728	10499	10998	
730i	12399	12898	
733i	13599	14098	
BRISTOL (1 dealer)			
412 SE convertible-saloon	—	29314	
603 S2	—	32432	
BUICK (1 dealer)			
Century	—	9052	
CADILLAC (1 dealer)			
Seville Elegante	—	20492	

(lhd only)	—	18263
Seville	—	17293
Seville (lhd only)	—	15064
Fleetwood-Brougham d'Elegance	—	14951

CATERHAM CARS (0 dealers)		
Super Seven TC	4579	—
1600 GT	4117	—

CHEVROLET (1 dealer)		
Caprice Classic	12166	—
Classic (lhd only)	10078	—
Classic estate	11283	—
Classic estate (lhd only)	10195	—
Monte Carlo coupé (lhd only)	9324	—
Corvette (lhd only)	11532	—

CHRYSLER (650 dealers)		
Sunbeam 1.0LS	2624	—
1.0GL	2857	—
1.3LS	2856	3144
1.3GL	3190	3475
1.6GL	3216	3501
1.6GLS	3561	3846
Avenger 1.3LS	2941	3326
1.3GL	3363	3648
1.3LS estate	2941	3326
1.3GL estate	3710	3995
1.6LS	3053	3338
1.6GL	3475	3760
1.6GLS	3803	4088
1.6LS estate	3378	3563
1.6GL estate	3822	4107
Horizon LS (1118cc)	2925	—
LS (1294cc)	3057	—
GL (1118cc)	3313	—
GL (1294cc)	3445	—
GLS (1294cc)	3840	—
Hunter DL	3183	—
Super 180	3573	3861
2litre	4074	—
Alpine LS (1294cc)	3424	—
LS (1442cc)	3624	—
GL (1294cc)	3763	—
GL (1442cc)	4046	—
GLS (1442cc)	4669	—
Matra Rancho	6007	—

CITROEN (242 dealers)		
2CV6	2071	—
Dyane Weekend	2276	—
GS special estate	3211	—
estate	5759	—
Club	3543	3771
Club estate	3783	—
Pallas	3934	4162
CX2000	5581	—
Pallas 2400 Injection	—	7462
CX2400 Super	6223	6415
Pallas	6835	7027
GTi	7441	—
Prestige Injection	9920	—
Safari	6389	6701
S Familiale	6502	6813
CX2500D	6460	—
D Safari	6748	—
D Familiale	6861	—

COLT		
Lancer 1200 Super	3149	—
1400GL 2dr	3449	3774
4dr	3599	—
GLX 3dr hatchback	3649	—
1400 estate	3749	—
Celeste 1600ST	4049	—
GS	4249	—
2000GT	4549	—
Sigma 1600GL	4249	4574
2000GLX	4799	5124
estate	5349	—
Sapporo 2000	5949	6274

DAIHATSU (60 dealers)		
F20 soft top	4649	—
hard top	4800	—
F50 soft top (diesel)	5110	—
hard top (diesel)	5260	—

DATSUN (400 dealers)		
Cherry SII 2dr L	2525	—
2dr GLS	2625	2870
4dr GLS	2755	3012
GLS estate	2817	—
hatchback coupé	3025	—
Sunny 1200GLS 2dr	3025	—
1400GLS 4dr	3125	—
2dr GLS	—	3467
1400 4dr GLS	—	3470
1200 estate	—	3310
1400 coupé 4-speed	3427	—
Violet 140J Mk3	3354	—
160J Mk3	3417	3697
SSS coupé	3765	—
Bluebird 160B MkII	3596	3683
180B	3705	3985
180B estate MkII	3985	—

WHAT WOULD be your reaction if your supermarket began charging separately for the packaging around the items on your shopping list... and, for good measure, added a bit more on top to cover the cost of ferrying the stock from the warehouse? No doubt you would protest at being told by the check-out girl that, yes, the stamp on the corn-flakes packet does say 29½p, but the box is 3p extra, and there's another 1p, of course, to cover transport.

Yet, ludicrously, this is how we buy new cars. With few exceptions, over and above the advertised price of the vehicle we are asked to pay a delivery fee, the cost of numberplates and road tax.

Take, for instance, the price-tag on the windscreen of a new Ford Escort Popular 1100. The figures suggest that it's yours for £2364, but you'll be asked to write a cheque for £2486 because the 'hidden'

New-car prices: 'obligatory extras' that add ££££s

charges—delivery £57, numberplates £15 and road tax £50—amount to another £122.

Only one in eight of Britain's manufacturers and importers is even remotely forthcoming about the real cost of new models. An advertisement may boast that a car costs £2500, but once the obligatory extras are slapped on the price inevitably creeps up. Seatbelts, at long last, are now included in the deal, but

there remains a catch: the cheapest quote will undoubtedly be for the static variety, and if you want the inertia-reel type they will probably cost another £16 or so. And few dealers these days seem prepared to wave customers on their way with a few free gallons of petrol—despite the fact that those customers have just spent a few thousand pounds.

But then, motor traders are in business, not philanthropy. And of one thing you can be sure: the 'extras' will go on being added for as long as they're allowed to be... which is likely to be years, following the disbanding of the Society of Motor Manufacturers and Traders' working-party that was looking into the matter.

Why the extra charges continue, or are allowed to continue, is a mystery against the backdrop of recent consumer legislation and the spread of Office of

PRICE-GUIDE

180BB SSS			
MkII	4073	—	
Laurel 200L6	4565	4884	D11/78
2litre MkII	4844	5163	
2litre MkII PAS	5076	5375	
Skyline 240K	6474	6793	
280ZX 2-seater	8227	8546	D7/78
280ZX 2 + 2	9124	9443	
280C saloon	6300	6619	
280C estate	6138	6457	

DE TOMASO (3 dealers)			
Pantera GTS	18850	—	
Longchamp	—	20239	
Deauville	—	23181	

FERRARI (15 dealers)			
Dino 308GT4	16104	—	
308GTB	17433	—	
308GTS	18274	—	
400GT	28454	28454	
512BB	30298	—	

FIAT (350 dealers)			
126	1864	—	
de Ville	2030	—	D1/79
127 900L 2dr	2422	—	RI137
1050L 3dr	2539	—	
1050C 3dr	2648	—	
1050CL 3dr	2756	—	RTR429
Sport	3093	—	
128 1300CL	2985	—	
Berlinetta	—	—	
Special Series	3580	—	
X/19 1500	4675	—	
Mirafiori 1300L	—	—	
2dr	3038	—	
1300L 4dr	3166	—	
1600 CL 4dr	3700	—	
estate	4044	—	RTR412
Supermirafiori	—	—	
1600TC 4dr	4252	—	D10/78
Mirafiori Sport	4786	—	
132 2litre	5000	—	D12/78

FORD (1238 dealers)			
Fiesta 950	2502	—	RTR417
950L	2780	—	
1100	2631	—	
1100L	2907	—	
1100S	3231	—	
1100 Ghia	3612	—	RI170
1300S	3399	—	
1300 Ghia	3742	—	
Escort 1100	—	—	
Popular	2503	—	RI136
1100 Popular	2611	—	
Plus	—	—	
1100 Popular	2719	—	
Plus 4dr	2719	—	
1100L	2843	—	
1100L 4dr	2951	—	
1100 estate	2804	—	
1300 Popular	2586	—	
1300 Popular	—	—	
Plus	2707	—	D4/78
1300 Popular	—	—	
Plus 4dr	2815	—	

1300L	2924	3199	
1300L 4dr	3032	3307	
1300GL	3211	3486	
1300GL 4dr	3318	3593	
1300 Sport	3388	—	
1300 Ghia	3764	—	
1300 Ghia 4dr	3872	—	
1300 estate	2945	—	
1300L estate	3251	—	
1300GL estate	3604	—	
1600 Sport	3485	—	
1600 Ghia	3969	4244	D4/79
Cortina 1300	3017	—	
1300 4dr	3132	—	
1300L	3219	—	RTR372
1300L 4dr	3336	—	
1600 4dr	3312	—	
1600L	3515	3790	RTR404
1600GL	3843	4118	
1600 Ghia	4549	4824	
1600 estate	3677	—	
1600L estate	3914	4189	
1600GL estate	4242	4517	
1600 Ghia	—	—	
estate	4949	5224	
2000GL	4058	4333	
2000S	4316	—	
2000 Ghia	4678	4953	
2000GL estate	4457	4732	RTR413
2000 Ghia	—	—	
estate	5077	5352	
2300GL	4580	4855	
2300S	4837	—	
2300 Ghia	5199	5474	
2300GL estate	4978	5253	
2300 Ghia	—	—	
estate	5598	5873	
Capri 1300L	3462	—	RTR373
1600L	3685	3959	
1600GL	3917	4191	RTR342
1600S	4428	—	
2000GL	4122	4386	
2000S	4615	—	RI166
2000 Ghia	5363	5638	
3000S	4965	—	
3000 Ghia	—	6047	RI114
Granada 2000L	4853	5188	RI128
2000L estate	5567	—	
2100 diesel	5221	—	
2300L	5134	5469	
2300GL	6242	6577	
2300L estate	5848	—	
2800GL	—	6670	
2800i GLS	7296	—	
2800 Ghia	—	8072	
2800i Ghia	8453	8788	
2800GL estate	—	7417	D8/78
2800i GLS	—	—	
estate	7930	—	
Ghia 2800	—	—	
estate	—	8766	D8/78
2800i Ghia	—	—	
estate	9088	—	

FORD US (14 dealers)			
Mercury	—	—	
Monarch rhd	—	8862	
lhd	—	7862	

HONDA (246 dealers)			
Civic 1200 3dr	2870	3090	RTR362
1200 5dr	3060	3280	RI155
Accord 3dr	4015	4275	RTR420
4dr	4215	4375	D4/79

JAGUAR ROVER TRIUMPH (350 dealers)			
Jaguar			
XJ6 3.4	11309	11309	RTR380
XJ6 4.2	12440	12440	
XJ12 5.3	—	15129	RTR305
XJS	16112	16112	
Daimler			
Sovereign 4.2	13098	13098	
Double-Six	—	15803	
Vanden Plas 4.2	—	17323	
Double Six			
Vanden Plas	—	20392	
Rover 2300	6111	6478	D8/78
2600	6911	7138	
3500	8111	8338	RTR428
Range Rover 3.5	9931	—	D2/79
Land-Rover	4504	—	
diesel	5098	—	
lwb	5263	—	
lwb diesel	5857	—	
lwb 6-cylinder	5544	—	
Triumph			
Spitfire	3480	—	
hardtop	3578	—	
Dolomite 1300	3381	—	
1500	3608	3961	
1500HL	4111	4464	
1850HL	4551	4904	
Sprint	5523	5642	
TR7	4880	5079	

MG			
Midget	3086	—	
MGB Sports	3110	—	RTR243
MGB GT	4675	—	

JEEP (60 dealers)			
CJ7 soft top	5311	—	
hard top	5701	—	
Renegade soft	—	—	
top	—	6761	
hard top	—	7111	
CJ Golden	—	—	
Eagle	6761	—	
hard top	7111	—	
Cherokee 4dr	—	—	
(6-cyl)	8991	9091	
S (6-cyl)	—	9911	
S V8	—	10491	D2/79
Chief V8	—	10791	
Golden Eagle	—	—	
Chief	—	11111	

LADA (190 dealers)			
1200	2163	—	RI175
estate	2463	—	
1300 ES	2530	—	D4/78
1500 estate	2593	—	
1300ES estate	2978	—	
1600	2793	—	RI173
1600ES	3171	—	RI173
Niva	4098	—	

LANCIA (127 dealers)			
Beta 1300	3624	—	
1600	4328	—	
2000	4419	—	RI171
2000ES	5015	—	
Beta coupé			
1300	4313	—	
1600	4919	—	
2000	5317	—	
Beta Spyder			
2000	5780	—	
Beta HPE 1600	5600	—	
2000	5998	—	
Gamma Berlina	7196	—	
Gran Turismo	9246	—	

LOTUS (58 dealers)			
Elite 501	12899	13272	
502	13833	—	
503	14341	—	
504	—	14518	
Eclat 520	11430	—	
521	12335	12708	
522	13293	—	
523	14801	—	
524	—	13978	
Esprit	12811	—	

MASERATI (9 dealers)			
Merak SS	17811	—	
Kyalami	23591	—	
Bora	24001	—	
Khamsin	25791	26291	

MAZDA (260 dealers)			
1000 hatchback	2829	—	
1300 hatchback	3059	—	D4/78
1300 hatchback	—	—	
5dr	3209	—	RTR424
1.4 Special	—	—	
hatchback	3429	—	
1400 hatchback	—	—	
5dr	—	3529	
1400 estate	3429	—	D5/79
818	3029	—	
929 estate	4479	4779	

MERCEDES-BENZ (97 dealers)			
200	7447	—	
200D	7613	—	
230	—	8520	
230C	—	10386	
240D	8535	9095	
240D lwb	—	13289	
250	—	9806	
250 lwb	—	13289	
300D	—	10568	
280E	—	11700	
280SE	—	13678	
280CE	—	12708	
350SE	—	15915	
350SL	—	15755	
450SE	—	17136	
450SEL	—	18095	
450SL	—	16836	
450SLC	—	19810	
450SEL 6.9	—	28721	

Fair Trading-inspired codes of practice that generally have brought more honesty into retailing. Unfortunately, the motor trade's own code of practice is vague on the subject of advertised pricing. It states that 'a price quoted should be the price at which the consumer can buy the goods', but goes on to give dealers a let-out by declaring: 'If the price excludes delivery charges, number-plates or seatbelts, such exclusions should be clearly specified.'

The snag is that, in newspaper and magazine adverts—probably the first sight a customer gets of performance and price details—the 'extras' are in very small print. On dealers' price-lists, too, they are not given any particular prominence.

A notable exception is the price-tag on the Lada 1300ES, imported by Satra Motors, that clearly states a price of

£2530. You pay not a penny more; delivery charges, road tax and number-plates are included. Lancia and Mercedes-Benz include delivery charges on the UK mainland. Three others offer number-plates, too—Alfa Romeo (which also throws in free routine service parts for up to two years), Colt (which, in addition, has rear foglamps as standard) and Bristol. But these six makers account for less than 5% of all new-car registrations in the UK.

Ford, by contrast, has taken a backwards step. Between 1965 and 1975, it included delivery charges in its new-car price-package. But when rivals failed to follow suit, the idea was dropped. Ford would still like to see the system widely adopted. 'But we're not going out on a limb,' says a spokesman.

Delivery charges, many of which are not specified by car manufacturers, can hurt,

adding anything from £45 to £70 to the final bill. The actual price charged is largely up to individual dealers and, so far as imported cars are concerned, covers only the distance from the concessionaire's HQ to the showroom. The cost of transporting the vehicle from the factory—thousands of miles, if it's a Japanese model—is included in the manufacturer's advertised price.

Delivery charges levied on cars made in Britain are as hard to fathom. Isn't it a bit quaint that a Ford customer in Dagenham, Essex, only a stone's throw from the assembly line, should be liable for the same £57 for delivery as a client in Dundee? More to the point, why shouldn't a purchaser be able to collect the car of his choice from the factory and, cutting out a middle man, avoid paying this extra charge altogether. The manufacturers, of course, can think of any num-

MORGAN (16 dealers)			
4/4 1600	4858	—	
4-str	5344	—	
Plus 8	7093	—	

OPEL (220 dealers)			
Kadett Economy	2576	—	
DL	2797	—	
City DL 3dr	2861	—	
Special	3027	—	
Special 3dr	3126	—	
Special 4dr	3107	—	
Special estate	3306	—	RTR338
coupé	3234	3533	
Ascona	3372	—	
Ascona 4dr	3481	—	
DL	3764	4134	
1.6DL	3872	4242	
2.0DL	4067	4437	
2.0 Berlina	4403	4773	
Manta 2.0	—	—	

Berlinetta	—	—	
hatchback	5082	5452	
coupé	4967	5337	RTR407
Rekord	4871	5265	
Berlina	5139	5533	D12/78
Berlina HL	5908	6302	
estate DL	5531	5925	
DL diesel	5791	6185	
estate DL diesel	6245	6639	
Senator	—	10086	
Monza coupé	10360	10360	

PANTHER (34 dealers)			
J72 4.2	18110	18505	
de Ville 5.3	—	—	
saloon	—	50086	
convertible	—	60628	
Lima	6182	6543	
Lima Turbo	8113	—	

PEUGEOT (240 dealers)			
104GL	2775	—	RTR406
104ZL	2816	—	
104SL	3115	—	RTR406
104ZS	3265	—	RI146
104S	3520	—	
304GL estate	3341	—	RTR386
304SL estate	3595	—	
305GL	3495	—	D9/78
305GR	3786	—	D9/78
305SR	4125	—	RI162
504	4261	4777	RI174
504 estate	4730	—	
504 diesel	4890	—	RI125
504 diesel	—	—	
estate	5325	—	
504GL	4855	5371	RI159
504GL estate	5268	5784	
504GL diesel	5556	—	RTR425
504TI	5321	5837	RTR358
504 Family	5302	5818	
504 Family	—	—	
diesel estate	6003	—	
604SL	7444	7958	RTR391
604TI	8490	8853	RI167

POLSKI FIAT (190 dealers)			
125P	2259	—	
estate	2579	—	
Polonez	3129	—	RTR379

PONTIAC (1 dealer)			
Firebird	—	—	
Trans-Am	—	9312	

PORSCHE (18 dealers)			
924	8680	9129	D7/78
924 Lux	9129	9578	
911SC (coupé or targa)	14679	—	
911SC (sport coupé or targa)	16429	—	
928	20629	20629	
Turbo	26379	—	

RELIANT (260 dealers)			
Robin saloon	2158	—	
super saloon	2486	—	
estate	2325	—	
super estate	2591	—	
Kitten DL	2439	—	
DL estate	2610	—	
Scimitar GTE	7820	7958	RTR303

RENAULT (420 dealers)			
4	2338	—	RTR364
4TL	2524	—	RTR364
5	2447	—	
5TL	2742	—	D3/78
5GTL	2953	—	RI143
5TS	3290	—	RTR370
5 auto	—	3353	
5 Gordini	4251	—	
6TL	3037	—	RTR364
12	2932	—	RTR385
12TL	3247	—	RTR385
estate	3623	—	RTR374
14TL	3163	—	RTR414
14GTL	3237	—	
15GTL	4076	—	D5/78
16TL	3893	4220	RTR291
16TX	4722	5048	RTR359
17TS	5041	—	
18TL	3416	—	
18TS	3707	4058	
18GTL	3918	—	
18GTS	4336	4606	
20TL	4592	4957	RTR409
20TS	5487	5852	D12/78
30TS	6592	6958	RI134
30TX	7821	8067	

ROLLS-ROYCE (35 dealers)			
Silver Shadow II	—	32173	RTR312
Silver Wraith II	—	37871	
Corniche	—	46720	
Convertible	—	49630	
Carmargue	—	56907	

SAAB (186 dealers)			
99L 2dr	4631	—	
99GL 4dr	5041	5461	RTR419
900GL 3dr	5661	—	

900GLS 3dr	5911	6361	
900 5dr	6131	6691	
900EMS 3dr	7131	—	
900GLE 5dr	—	7811	
Turbo 3dr	8811	—	
Turbo 5dr	9131	—	

SIMCA (650 dealers)			
1005GLS	—	—	
Special	2268	—	
1006GLS	—	—	
Special	2363	—	RTR357
1100LE 3dr	2451	—	
1100LE 5dr	2522	—	RTR298
1100GLS estate	2929	—	
Special	2887	—	

SKODA (250 dealers)			
S110R coupé	2019	—	
105S	1970	—	
105L	2070	—	D1/79
120L	2170	—	
120LS	2420	—	RI169

SUBARU (61 dealers)			
1600DL 2dr	2964	—	
4dr	3092	3467	D6/78
Custom 4dr	3420	—	
coupé	3116	—	
GFT	3619	—	
DL estate	3455	—	
4wd estate	4420	—	D2/79

SUZUKI (20 dealers)			
LJ80 4wd	3006	—	
LJ80V 4wd	3456	—	

TOYOTA (232 dealers)			
Starlet GL 3dr	2974	—	D3/79
GL 5dr	3065	—	D3/79
Corolla 30-1200	—	—	
DL 2dr	2941	—	RTR399
1200DL 4dr	3053	3246	
estate	3305	—	
1600 Liftback	3665	—	
Carina 1600 DL	3723	3998	D10/78
estate	4006	—	
Celica 1600ST	4185	—	
2000ST Liftback	4551	—	RTR423
2000XT Liftback	5246	5431	
2000GT Liftback	5533	—	
Cressida 2000	—	—	
DL	4378	4670	
estate	4709	5005	
Crown 2600	—	—	
Super	—	7620	

TVR (28 dealers)			
3000M	7368	—	
convertible	7716	—	
Taimar	8011	—	D7/78
Turbo	11045	—	
convertible	11569	—	
Taimar Turbo	11836	—	

VAUXHALL (650 dealers)			
Chevette E 2dr	2594	—	
E 3dr	2635	—	
E 4dr	2701	—	

L 2dr	2841	—	
L 3dr	2881	—	
L 4dr	2948	—	RTR396
L estate	3167	—	
GL 3dr	3200	—	D3/79
GL4dr	3266	—	
2300HS 3dr	5713	—	
Viva E 2dr	2680	—	RTR378
E 4dr	2788	—	
1300L 2dr	3107	—	
L 4dr	3035	—	
L estate	3254	—	
GLS 2dr	3309	—	
GLS 4dr	3416	3714	
1800GLS 4dr	3594	—	
Cavalier 1300L	—	—	
2dr	3270	—	D9/78
1300L 4dr	3377	—	D9/78
1600L 2dr	3448	3818	RTR382
1600L 4dr	3555	3925	RI163(a)
GL 4dr	3894	4264	
Sports hatch	4519	4889	
2000GL 4dr	4102	4472	RI152
GLS coupé	4687	5057	RTR407
Sports hatch	4728	5098	
Carlton 2000	4966	5360	D12/78
estate 5dr	5458	5852	
Royale	8489	8883	
coupé	8797	8797	

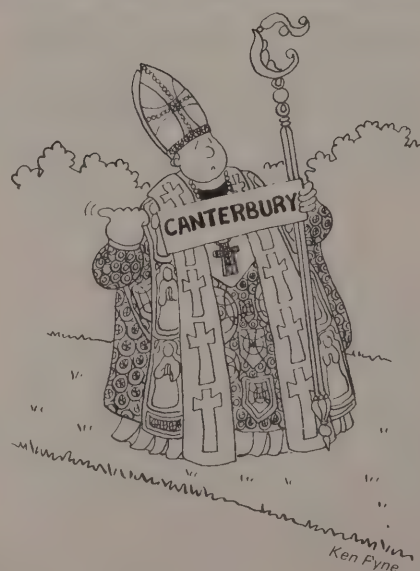
VOLKSWAGEN (330 dealers)			
Polo N900 3dr	2790	—	RTR408
L900 3dr	3080	—	RTR408
GLS1100 3dr	3445	—	RTR408
Derby S1100	—	—	
2dr	2930	—	
LS1100 2dr	3270	—	D3/79
GLS1300 2dr	3585	—	RI168
Golf N1100 3dr	3080	—	
L1100 5dr	3520	—	RTR411
LD (diesel) 1500	—	—	
5dr	4210	—	RI160
GL1100 3dr	3645	—	
GLS1460 5dr	4050	4318	D6/78
GTI1600 3dr	4820	—	
Passat LS1600	4525	4819	RTR388
GLS1600 5dr	4840	5134	RI165
LS estate	4665	4959	
GLS estate	5110	5404	
Scirocco	—	—	
GLS1600	—	—	
coupé	5110	5444	D6/79

VOLVO (225 dealers)			
343DL	3693	3843	D10/78
244DL	5435	5854	RTR426
244GL + o/d	6619	6934	RTR426
244 GLE	7186	7501	
245DL estate	6053	6473	RTR368
245GLE estate	7190	7506	
264GL	7799	8114	
264GLE	8660	8976	RTR395
265GL	7938	8253	
265GLE estate	8438	8753	
262C coupé	12849	13150	
264TE	—	—	
Limousine	—	17298	

ber of reasons, and hint darkly at trades union agreements and marketing procedures. Indeed, one spokesman says that even in the days after the war when customers *could* collect cars from the works, they still had to pay a delivery charge.

Numberplates are a matter of individual taste: a Jaguar owner may fancy expensive adornments fore and aft, whereas a Mini man might prefer something plainer. But even allowing for this, there is no pattern when it comes to dealers' charges.

Depending on the individual retailer, numberplates can come to anything between £6 and £16. One salesman admits that he pays around £3 for a pair, and charges the customer £6.50. Reverse-engraved sets are even more profitable: these net him nearly £7 profit. Not bad for the seven minutes' labour it takes to



fix them to the car at the front and rear.

So far as seatbelts are concerned, Mercedes-Benz is the odd motor-manufacturer out. Its factory-fitted restraints do not comply with British Standards Institution regulations and, as a result, belts are fitted here and customers charged extra for them. And, finally, as for that other on-the-road necessity—road tax—only Satra Motors offers this in its all-in Lada deals.

Most manufacturers believe that inclusive pricing would harm trade, but Satra reports that business is 'very healthy'. In fact, in 1978 sales leapt by 46% over the previous year when the all-in package was introduced.

So at least *someone* recognises that we're living in a different age. For in the sophisticated, streamlined 70s there is surely no room or excuse for 'traditions' that cost new-car buyers so dear. RICHARD FEAST

investigation, the government brought into force a regulation governing performance on mopeds registered after 1 August 1977: by a combination of modified gearing, carburation and exhaust design, manufacturers made it difficult, and costly, for youngsters to make the new bikes any quicker. But teenagers were still able to get their hands on older, faster models for quite some while after the government's deadline. The reason: many dealers stockpiled machines, and registered them just before the ban took effect.

Now that these supplies have run out, teenagers are keen to buy secondhand models not fitted with speed-limiting devices. Indeed, dealers report a 20-25% increase in used-moped sales, and the way in which older machines are holding their price reflects their popularity. A brand-new Suzuki AP50 retails for £300, but a two-year-old 'de-restricted' model is not far behind at around £250.

Cycle logical?

Meanwhile even lower down the age scale, child pedal-cyclists are having accidents in epidemic proportions, say Britain's doctors—10,000 killed or injured a year, and 70% of their crashes resulting in head injuries. That's why the medical men have launched a campaign to get child cyclists to wear crash helmets.

It's good to see something constructive being done, but, though such a plan might cut the number of casualties, it won't make a ha'p'orth of difference to the number of accidents.

Sadly, the one national effort to achieve something in this direction—the RoSPA-run cycling proficiency scheme—is clearly not succeeding. And it's perhaps not



The long-running seatbelts saga comes under DRIVE scrutiny once again, with a new 1000-motorist survey carried out for us. One of its more-heartening findings is the current overwhelming support for fitting rear seatbelts to cars and

for banning children from front seats. Put the two ideas together, and you have a market for a device such as the one left—a special cushion that will enable older youngsters to wear adult seatbelts without the risk of submarining—slipping out from underneath the belt—in a crash.

It's a Volvo idea (of course) that the company plans to introduce to Britain, along with its custom-built, rearward-facing child seat for younger children, another idea that has consistently won our support (see DRIVE's various). And it's double heartening that home firm, KL Automotive Products, too, is considering a rearward-facing restraint.

This amount of active concern for motoring youngsters is uncharacteristic of Britain: a parliamentary bill aimed at banning under-13s from front seats was given its first reading only a few weeks ago. The Royal Society for the Prevention of Accidents is, as we go to press, lobbying Transport Minister William Rodgers to

declare the bill 'non-contentious'; without this qualification, the sad truth is that, in election-minded Britain, it doesn't stand a cat's chance in 'that hot place'. And the certainty is that, next year, like this year and last year, another 800 children will be injured or die on the front seats of UK cars. That's quite apart from the 1500 maimed or killed in rear seats, the vast majority travelling unrestrained: the government Transport and Road Research Laboratory investigated a sample of 2595 child casualties in 1973-1974... and found that 2466 had no belts or harnesses.

A DRIVE reporter carried out his own quick survey, comparing child-motoring habits in Swedish Volvo's home capital, Stockholm, and in London: of 100 cars carrying youngsters in Stockholm, he saw four children sitting next to drivers; in the British capital, 100 cars yielded 39 children on front seats—and, even more dangerous, a further 10 on the laps of front-seat adults!

hard to see why: satisfying an examiner that you can pedal a bike around a school playground competently is a far cry from proving that you're competent on the road in traffic.

One road safety officer tells DRIVE that she has followed children, who had just gained their playground proficiency certificates, around the roads: 'They weren't nearly as confident or safe, and they certainly weren't ready to go on the road.' But that is where their parents were allowing them, probably encouraged by RoSPA's 'proof' of expertise.

Perhaps the biggest reason to justify a change in the system is the recent discovery that pedal-

ling into the road from a pavement or driveway without looking is now as common a cause of cycling accidents as turning right from a major road—a fact that emerged when Thames Valley Police examined 500 accident reports in detail. No one had recognised the problem, and proficiency courses have never included this danger in the curriculum.

Tourists de force

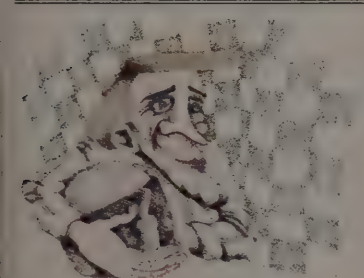
Stand by for the biggest-ever invasion of Britain: according to the British Tourist Authority, 12million foreign visitors are expected this year, and between them will spend £3500million.

The AA's Driveway scheme is

a fair barometer of this balmy climate in the tourist business: this is its sixth year of making hotel reservations for foreign visitors touring Britain. Last year, 10,000 Americans, Europeans, Canadians, Australians and S Africans used Driveway as this issue goes to press, it is reported that bookings are 100% up on the same period last year.

Golden 'gate'

The AA's annual accolade for significant achievement in motoring has gone to Quinton Hazel Automotive, of Nuneaton, Warwickshire, for... a lorry accessory. QH took the AA's gold medal for the Underider—a sort



MOTOR SPORT

Disappearing dollies

WHATEVER HAPPENED to the pretty girls in motor racing? The popsies who used to decorate the pit counters, the charming camp-followers, the darlings who were once such an integral part of big-time motor racing?

They, alas, are of the past. Like

dodos, they have disappeared—not because the tastes and whims and needs of top drivers have changed. Today's stars, just like those of 20 years ago, still need their helmets carried, and are not opposed to a little dancing and other nocturnal amusements. But their pit popsies have been replaced by the more permanent figures of... wives. They attend to all needs, and at the same time form a formidable barrier between their sweat-stained, super-hero husbands and the dwindling band of 'fanciers'.

Twenty years ago, the grids were filled with the fun-loving racers of the late 1950s. Men like Peter Collins, Mike Hawthorn, 'Taffy' von Trips, the Marquis 'Fon' de Portago. All tackled their leisure-time with the same gusto that they devoted to the race track. There were parties, poolside frolics, mid-night trips to nightclubs, and inevitably complaints.

It's all very different in 1979. The

pit popsies have gone because today's professional drivers are a much more serious bunch, and because at a recent count 22 out of 24 men on a Grand Prix grid were married. The two exceptions were James Hunt, and the discreet Ulsterman John Watson.

If the top-liner of 20 years ago better fitted the image of the daring, dashing, bachelor-hero, today's supermen are faced with a more demanding schedule and are too much involved as technicians to have time, or energy, for the playboy antics of their predecessors. Two hours roasting in the confines of a GP car at speeds of over 150mph, where concentration is 101% and judgement is to the inch, demands much both physically and emotionally.

Jackie Stewart, the ultimate in racing professionalism, once told me that he never allowed himself the pleasures of sex during the two days prior to a race. Stirling

Moss thought along similar lines, but confessed that he once broke his no-sex rule the night before a major race at Goodwood. He went out and won the following day, and kicked himself for the years of self-denial!

For safety's sake, I shall not reveal the name of the driver, racing in the early 1960s, who boasted to me at the Italian Grand Prix one year that his evening consumption of ladies was the same as his wine. He regularly drank two bottles at dinner. But he was seldom a race winner.

Today it's the *mechanics* who tell stories of late-night parties and talk of conquests among the girls. It's a changing world in which the mechanic assumes the role of the playboy, and the hero and his wife jet away from the scene of triumph to the land of reality and their waiting, nanny-tended children at home.

Will it all change again by 1984?

NICK BRITTAN

of 'gate' that hangs down from the tail of a lorry to absorb progressively the collision force of any car unfortunate enough to run into its rear.

Two silver medals were awarded: one to Berm Optical Products for an acrylic pvc rear-view lens that enables a motorist—especially a caravanner—to see the road area immediately behind through the interior driving mirror; the other went to Cornwall County Council in association with British Rail Western Division and Penwith District Council for a park-and-ride rail scheme that should take some of the summer congestion off St Ives roads.

Can a conviction for having an illegal tyre really be more serious than being caught with a bogus MoT test certificate? Bearing in mind that the motive behind buying a blank certificate on the black market is almost certainly because the offender knows that his car will be declared unroadworthy by an MoT tester, the answer according to logic would seem to be a pretty obvious No.

But not so, judging by the penalties meted out by magistrates recently in a spate of cases involving stolen certificates in the north and south of England: receivers of these were merely fined an average £100. Yet if the same drivers had each been convicted of having faulty tyres on their cars, they would have been given a mandatory endorsement and probably a fine of £50 on top. Indeed, faulty brakes, steering or anything that renders a vehicle dangerous are all offences that carry automatic endorsements.

Why did the false MoT brigade get off so lightly? Because the bogus documents came to light in road-tax offices, and not as a result of the offenders being stopped on the road.

Perhaps it would have been fairer if, in addition to the £100

finer, magistrates had ordered their cars to be inspected and subsequent prosecutions taken out against them for each unroadworthy item found.

Annual General Meeting 1979

Notice is hereby given that the Annual General Meeting of the Automobile Association will be held at the Savoy Hotel (Victoria Embankment entrance), London, on 17 May 1979 at 11am, to receive the Report of the Committee, to adopt the Accounts and Balance Sheet for the year ended 31 December 1978, to elect members of the Committee, to elect and appoint Auditors and to deal with any other business which the Meeting is competent to transact.

Dated 3 April 1979

By Order of the Committee of the Association

W Lynch, Secretary, Fanum House, Basingstoke, Hants RG21 2EA.

The Report and Accounts are available to members on application to the Secretary.

A good idea from Milton Keynes, Bucks. That's where, in July, the country's only purpose-built DIY garage will throw open its doors, offering 10 fully-equipped bays where, for £1.50 an hour, motorists will be able to service and repair their own cars. In warm, comfortable surroundings and—important—with the right tools for the job on hand, they will be able to complete tasks much more quickly than at home. And, for an extra fee, they will be able to call on an expert mechanic for help and advice.

The project is a co-production from Total Oil and Milton Keynes Development Corporation, but it is the brainchild of Lord Young of Dartington, chairman of the city's Mutual Aid Centre. 'The facilities,' he says, 'may encourage motorists to service their cars regularly and to carry out proper repairs rather than botching. It could make motoring a lot safer.'

If the experiment succeeds, there are plans to establish similar centres all over the country. Certainly, a similar idea has taken off in Sweden, where a motorists' co-operative now runs 400 such garages. In Britain, however, it's not the first time that the DIY idea has been tried . . . and most of them have failed.

The R12 apart, Renault has spent the last decade trying to convince car buyers, from economy-minded mini men to expense-account executives, that the best cars come with hatchbacks. But its new middle-weight car for the eighties, the 18, breaks with the tradition—it's a conventional saloon, with four doors and a boot (see right).

Four versions are available in



'Motoring books? Yes, straight ahead to Philosophy, a sharp lefthander, bear right at Modern History, a U-turn at Romance . . . and when you come to Theology, ask again.'



'Nine stone seven and a half pounds, lucky colour blue, and . . . LOOK OUT!'

the UK, to be joined some time near the end of the year by an estate. An enlarged 1397cc version of the Renault 12's engine powers the TL and GTL models, and the 1647cc Renault 16 power unit goes in the TS and GTS versions, both driving the front wheels. Renault's own electrically controlled three-speed automatic gearbox is available on the larger-engine varieties, and a five-speed box is standard on the GTS.

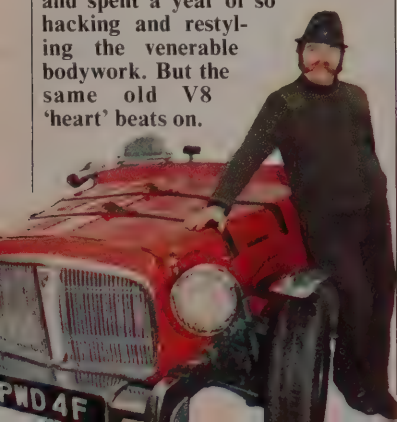
On a brief, pre-launch road impression, DRIVE tried both engines in TS and GTL form. Neither could be described as particularly quiet, but the smaller

one felt the sweetest . . . even if it did require plenty of gear changing to keep up the pace. The steering is lighter than the Renault rule, and that typically French cornering roll isn't so noticeable. Nevertheless, the 18 doesn't have the train-like high-speed steadiness of the Renault 5, and the ride, although competent, doesn't feel quite so absorbent.

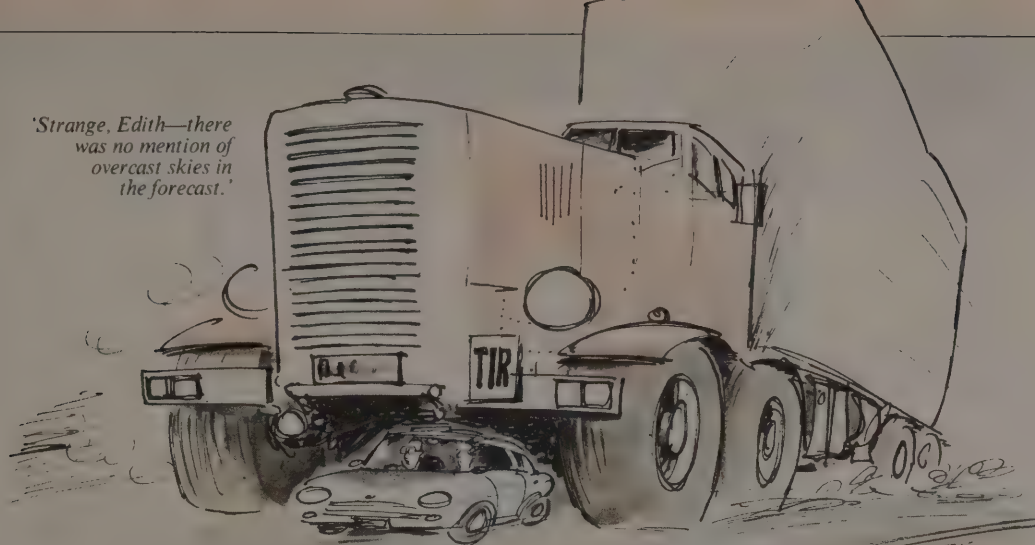
All models are very well equipped, right down to the bottom-of-the-range TL. And with prices ranging from £3313 to £4233, the 18 could certainly eat into the Ford Cortina/Vauxhall Cavalier market.



You won't find this Rover convertible in any catalogue—it's the handiwork of Colin Mann, of Coleshill, near Birmingham, who bought the 1967 Rover P5 that's beneath it all at the end of 1977 and spent a year or so hacking and restyling the venerable bodywork. But the same old V8 'heart' beats on.



'Strange, Edith—there was no mention of overcast skies in the forecast.'



Ford's motors

Cartoonist NOEL FORD hasn't even *been* to Dagenham, but his car output is prolific. And his humour comes in all colours . . . especially black

'Frankly, I'm worried—Arthur went in two hours ago to check the oil, and I haven't seen him since.'



One for all you folk who think that a car tester's life is one long party, hurling exotic roadburners around the country while everyone else is shackled to an office desk. This (left to right) is DRIVE staff writer Robert Oxford, photographer John Perkins and roadtester Richard Taylor braving one of the last snowy days of winter to get this issue's car-test pictures . . . at the inaptly named Sunnyside Riding

School, Liphook, Hants. Mind you, it has to be said that they do get some lovely transport as compensation. Last issue's car tests featured a photo session at the picturesque Hampshire Watercress Line, at Alresford; there, we could hardly persuade any of the team to look at cars as they were all too busy realising childhood dreams aboard the immaculately preserved steam trains.



MECHANIC

Wobblies

MANY PARTS of a car are manufactured to fine tolerances to reduce wear and noise, but the humble, pressed-steel road wheel can be up to $\frac{1}{8}$ in out of true and still be considered acceptable. Tolerances on tyres are pretty generous, too . . . but, if a wheel and tyre are fitted in such a way that their errors have a cumulative effect, it can spell trouble.

If, for example, the wheel is out of balance on its vertical centre line—that's called *static imbalance*—it will tend to bounce up and down, often dramatically.

When a wheel is out of balance on one side—*dynamic imbalance* or, more correctly, *couple unbalance*—it will tend to tilt from side to side and, if a front wheel, will also be affected by gyroscopic forces.

The result is shimmy . . . but, unlike Sister Kate's dancing, it is an unpleasant shake that usually occurs at 50–60mph and is felt with varying severity.

If the shake is bad and left unchecked, it will cause rapid wear of tyres, wheel bearings and suspension joints. So all four wheels should be balanced and rechecked from time to time.

On modern cars, it is unlikely that out-of-balance wheels will be responsible for triggering off anything too drastic or dangerous. But properly balanced wheels will undoubtedly mean longer tyre and suspension life and allow greater driving comfort.

You can do your own wheel balancing with an accessory-shop kit that is simple and can alleviate shimmy, but which is obviously no match for a garage's modern, sophisticated balancing machines, which do the job accurately in a fraction of the time for £1–£1.50 per wheel.

Some garages balance wheels on the car with an electronic gadget that calculates the variance in both static and dynamic imbalance, and specifies the weight of the small lead slugs needed to be clipped (or stuck, in the case of alloy wheels) on to the wheels, as well as their precise location in the rims.

Other garages balance wheels off the car with a machine that spins each wheel at high speeds. This system is more accurate, but the drawback is that it doesn't allow for imbalanced brake discs or drums.

BARRY FRANCIS

Roads information

Numbers in parentheses refer to maps in the 1978–1979 edition of the AA *Members' Handbook*.

BRITAIN

Major roads open A75 Newton Stewart bypass, $1\frac{1}{2}$ miles (38).

OVERSEAS

Austria New Arlberg Tunnel (14km long) runs south of and parallel to the Arlberg Pass. Toll: 120 schillings.

Denmark New road numbering system being introduced during 1979.

Three categories are: E roads (green and white signs), primary roads (one- or two-digit numbers on yellow boards), and secondary roads (three-digit numbers on white boards).

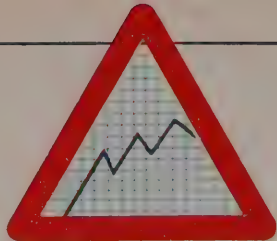
Portugal Auto-estrada do Norte E3—opening of 14km between Carregado and Aveiras de Cima delayed.

Yugoslavia Titograd-Skopje E27—reopened to caravans between Rožaj and Ribariće.

Seal of Approval

The AA's Seal of Approval has been awarded to Gunson's Tachostrobe Timing Light, the Cameron Price footpump and accessories, and Laureate Marine's Light Prompt audible light reminder.

Approval has lapsed on the Lucas Rearguard foglamp, and Mill Accessories' Fiamm horns.



INDEX

At the double

UNEXPECTEDLY high servicing and repair costs in November and December 1978 have helped to push the cost of running a car to more than £600 a year for the first time since DRIVE's Index of Motoring Costs was introduced in 1973, and this means that motorists are spending nearly twice as much as they did five and a half years' ago. That is the message of the latest Index figures, shown right.

Expenditure for the two months that normally produce the lowest servicing and repair costs of the year rose by 86% compared with the corresponding period in 1977—in December alone, the increase was more than double. And, although the average motorist drove 135 fewer miles last December than in November, he spent only £1.60 less (about two cut-price gallons), confirming either that he has had to pay more for his petrol or that, because of the winter tanker-drivers' strike, he was buying more petrol than normal to keep his tank full.

At 7.97p per mile, December was certainly the most expensive month in 1978 to run a car. And, compared to the last issue's Index returns, all other running costs also show increases—petrol up 98p, oil 46p, servicing and repairs £13.47, accessories 46p, insurance £1.03 and 'other costs' £1.18, making a total increase of £17.58. Throughout last year, too, insurance cover cost motorists more than 20% extra.

Once again, the Datsun Cherry/Sunny range continues to be the most economical at 5.12p per mile, with Austin's Allegro second at 5.38p per mile. Because it has recorded the largest drop in mileage, the Ford Escort 1300 has taken the most dramatic jump in running costs—up from 5.17p per mile to 5.77p.

Though the Austin Morris Princess 1800/2200s still suffer the highest monthly servicing and repair costs of all cars listed, at £29.03, British cars in general continue to give reasonable value at 6.45p per mile, being dearer to run only than Japanese models at 6.10p per mile and more economical than W Germans at 6.5p per mile and French and Italian cars, both of which now cost 6.57p per mile to run.

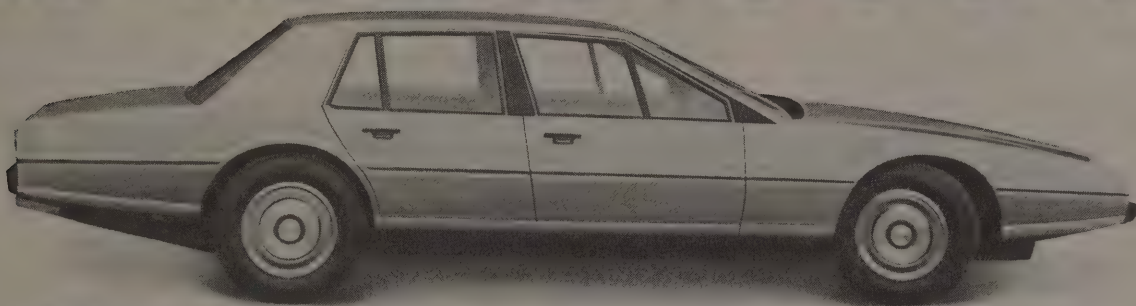
COST OF MOTORING: January 1978–December 1978

INDEX Oct 1973 = 100	104	191	203	106	219	100	175	206	199
MONTH-BY-MONTH ANALYSES (all cars) AND ENGINE RATING ANALYSES (post-1968 cars)			Petrol	Oil	Servicing repairs	Accessories	Insurance	Other costs	TOTAL
January 1978	616	7.17	21.07	0.64	11.23	0.61	3.99	6.63	44.16
February 1978	738	6.17	21.26	0.85	11.80	0.81	4.24	6.59	45.55
March 1978	674	6.69	21.47	0.70	11.33	0.76	4.22	6.59	45.08
April 1978	757	6.47	23.85	0.93	10.86	0.40	4.17	8.78	48.99
May 1978	762	7.82	24.86	0.63	21.56	1.18	4.33	7.05	59.62
June 1978	852	5.84	24.38	0.81	11.88	1.01	4.41	7.28	49.77
July 1978	813	6.55	24.92	0.89	14.19	0.31	4.41	8.50	53.22
August 1978	872	5.91	25.64	0.78	10.42	1.03	4.51	9.13	51.52
September 1978	798	6.56	23.27	0.84	15.08	0.65	4.45	8.02	52.31
October 1978	807	6.20	24.49	0.64	12.77	0.70	4.58	6.88	50.05
November 1978	784	6.88	24.72	0.54	15.01	0.38	4.60	8.68	53.94
December 1978	649	7.97	23.12	1.70	14.14	0.58	4.60	7.59	51.73
TOTAL (for year)	760	6.64	283.05	9.95	160.27	8.42	52.51	91.72	605.93
-900cc	563	6.09	14.17	0.52	8.89	0.84	3.99	5.87	34.28
901-1100cc	655	6.36	18.67	0.54	10.52	0.56	4.15	7.25	41.68
1101-1300cc	756	6.27	21.52	0.72	12.93	0.63	4.28	7.36	47.45
1301-1500cc	767	6.53	22.55	0.61	14.42	0.52	4.48	7.48	50.06
1501-1700cc	950	6.22	30.11	0.62	15.14	1.10	4.76	7.41	59.13
1701cc +	944	6.79	32.51	1.18	15.78	0.85	5.52	8.24	64.07
MODEL-BY-MODEL ANALYSES—post-1968 cars									
Chrysler Imp	435	6.55	15.83	1.14	2.34	0.00	3.54	5.71	28.54
Avenger	740	7.44	24.44	0.88	18.48	0.70	4.09	6.44	55.03
Hunter 1500/1750	786	6.74	24.19	0.76	13.34	1.78	4.28	8.67	53.01
Datsun Cherry/Sunny	820	5.12	21.12	0.73	8.73	0.00	5.00	6.35	41.93
Fiat 128/124	825	5.75	19.80	0.44	15.63	0.00	4.58	6.98	47.44
Fiat 500/127	420	9.15	10.93	0.24	16.69	0.00	4.43	6.13	38.41
Ford Escort 1100/Popular	787	5.85	22.84	0.50	9.52	0.76	4.07	8.35	46.03
Escort 1300	862	5.77	25.25	0.64	10.70	1.20	4.31	7.62	49.71
Cortina 1300	746	5.88	23.42	0.36	8.23	0.63	4.05	7.18	43.87
Cortina 1600	1037	6.27	32.69	0.49	18.05	1.54	4.52	7.72	65.01
Cortina 2000	969	6.64	33.77	0.78	15.57	0.62	5.59	7.99	64.31
Capri 1600	811	6.78	29.78	0.53	9.42	0.58	5.38	9.24	54.95
Granada/Consul	1173	6.82	44.44	1.52	20.45	0.00	5.70	7.95	80.05
Leyland Mini	549	6.58	14.79	0.40	9.92	0.37	4.10	6.53	36.12
1100/1300	537	7.33	16.51	0.87	9.89	1.81	3.79	6.53	39.40
Allegro	751	5.38	21.46	0.94	5.48	0.71	4.36	7.45	40.40
Maxi 1500/1750	755	6.49	23.90	0.74	13.24	0.00	4.34	6.76	48.97
Marina 1300	883	6.38	23.93	0.55	20.26	0.58	4.12	6.88	56.33
Marina 1800	963	6.43	29.33	0.55	19.38	0.65	4.79	7.25	61.96
Princess 1800/2200	685	9.75	22.89	1.16	29.03	3.06	4.38	6.20	66.73
Rover 2000/3500	861	7.30	32.01	0.47	16.86	0.37	5.36	7.80	62.87
Triumph Toledo/Dolomite	792	6.00	22.53	0.71	11.85	0.76	4.73	6.99	47.57
Triumph 2000/PI	768	7.47	32.62	0.89	10.26	1.16	5.58	6.81	57.32
Simca 1000/1100	674	6.80	21.38	0.38	13.61	0.24	4.28	5.92	45.82
Vauxhall Viva	733	6.07	20.25	0.79	11.98	0.25	3.93	7.28	44.48
Victor 1800/2300	672	8.58	26.03	1.36	18.58	0.84	4.32	6.56	57.68
VW Beetle	578	7.52	18.50	0.68	13.95	0.00	4.10	6.21	43.44
All Chrysler UK	751	6.78	23.96	0.90	13.25	1.25	4.18	7.40	50.94
Ford	911	6.19	29.27	0.59	13.00	0.92	4.61	7.92	56.32
Leyland	726	6.82	22.61	0.95	13.46	0.69	4.46	7.33	49.50
Vauxhall	789	6.16	23.18	0.88	12.81	0.27	4.18	7.33	48.65
All British	800	6.45	24.88	0.82	13.23	0.76	4.45	7.50	51.64
All Fiat	674	6.62	17.34	0.51	14.56	0.36	4.83	7.01	44.61
Renault	794	6.19	21.97	0.52	13.28	1.39	4.65	7.32	49.13
Simca	656	7.85	21.57	0.31	19.04	0.18	4.40	6.05	51.54
Volvo	933	6.26	34.32	0.62	8.37	1.14	6.42	7.56	58.43
All French	809	6.57	23.63	0.49	15.09	0.98	4.82	8.20	53.22
Italian	670	6.57	18.39	0.49	12.46	0.30	5.21	7.23	44.08
Japanese	879	6.10	24.42	0.85	15.46	0.12	5.43	7.37	53.64
W German	856	6.50	26.85	0.56	14.67	1.22	5.30	7.01	55.61
All Foreign	806	6.45	23.94	0.61	14.12	0.70	5.18	7.46	52.02
Average monthly costs (£) excluding depreciation									
Cost per mile (pence)									
Average monthly mileage									

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MY KIND OF PLACE

Eschewing the fat

THERE IS one test of a good restaurant that, to my mind, never fails to separate the sheep from the goats, yet that merry band of professional 'tasters' who report on the nation's eating places *never* seems to use it. I urge them to, as it's as unfailingly accurate as it is simple: take a vegetarian guest along on the investigatory foray; or simply announce that you wish to eat a vegetarian meal and ask what can be prepared for you.

It's amazing how effective this simple ploy is in determining the quality, efficiency and culinary imagination of the establishment. Of course, to be fair to the restaurateur, it is preferable to give him or her notice of your vegetarian guest when reserving the table. Though if he or she is any good at all, it shouldn't really

upset an apple-(or vegetable-)cart.

The number of people who are thinking seriously of becoming vegetarian, or who have indeed crossed the line and no longer eat meat, is increasing rapidly. There are many different types, from fruitarians (who eat only nuts, fruit and will not even destroy plant life) to the half-measure brigade (like myself) who consume fish and fowl but won't eat red meat. My wife Theresa will eat dairy produce and eggs, but will not touch food that has anything to do with the direct killing of an animal, bird or fish.

People give up meat for various reasons: expense, religious beliefs, on moral grounds, for health. All agree that the fat from meat dishes can be most unpleasant after a very short period of eating only vegetarian meals, and that one never suffers from the bloated, heavy sensation of indigestion—even after a very filling vegetarian lunch or dinner.

What about calories/proteins/polyunsaturated-fats and all those confusing dietary things? If you simply give up eating meat, and don't bother to consider what replaces it, then your health will suffer. But it isn't difficult to work out a simple and effective way of avoiding the stuff without becoming over-involved with the more odd-ball, and sometimes disgusting, nut roasts and soya-bean

patties that give rise to boring quips about freaky weirdos and their 'nut rissoles'.

In London, not surprisingly, it is possible to seek out an eating place to suit virtually every taste or requirement. But in the provinces I have yet to find a vegetarian restaurant that fulfils my three basic requirements: stays open in the evenings; provides an intimate atmosphere, with soft furnishings and romantic lighting; and offers—dare I say it?—wine.

Are the people who won't eat meat as dull and as boring as the handful of restaurants that cater to them make out? I think not. Yet when you do manage to unearth your local Salad Bowl or Vegetable Kitchen it will almost invariably feature scrubbed-pine benches, a Scandinavian-style interior, hearty check tablecloths . . . and a sign that announces CLOSED 3.30. Its tempting quiche dishes may well lure dieting office-workers during the lunch-hour; but vegetarians don't cease to exist after dusk, a quick jog round the block and a cup of cocoa.

It surely shouldn't need to be said, but vegetarians do *not* eat what others eat, with the meat and gravy removed. (Not if they can help it, anyway.) And that fact results in them, poor souls, being offered the world's dullest cuisine by eating places that should know better.

'Certainly, madame, would you like an asparagus soufflé? Or a nice cauliflower in a cheese-and-mushroom sauce? Or we could do you some fennel in a wine-and-cheese sauce, with selected vegetables and a side salad?'

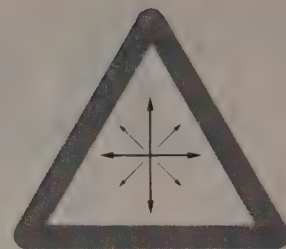
What music! And how rare to hear such on any waiter's lips. How delightful to find a restaurateur prepared to offer an imaginative alternative to the perennial plate of the 'set' vegetables—invariably overcooked, and virtually tasteless when divorced from the usual run-of-the-mill gravy.

The more-usual response is a begrudging offer to 'see if chef will do an omelette'. And this, when produced, is almost guaranteed to be a rubbery, soul-destroying piece of pale yellow indifference, accompanied by an appallingly unimaginative salad.

One day, soon, restaurant owners will wake up to the fact that it takes very little effort to include just one vegetarian dish as a standard part of their menus. Some already do, and haven't found their regulars driven away by a tidal wave of pot-smoking weirdos, bedecked with beads and carrying incense sticks.

Vegetarians are normal people. Their only distinction is that they care deeply about life. How pleasant if there were more restaurateurs to care about them.

JONATHAN HEWAT



WORLD-WIDE

Alfatter?

FOR SUCH a big company, Alfa Romeo makes a remarkably limited range of cars—only two basic models, in effect: the small Alfesud and the mid-size Alfetta, plus its Giulietta derivative.

But things are happening to change all that, and the Italian firm is readying a **new V6 model** for production that will take Alfa into competition with BMW, Mercedes-Benz, Volvo and others.

Volvo's directors must be starting to wonder if there's something that even their best friends won't tell them! First they tried to take over Saab ('merge with' was the official phrase), Sweden's only other car maker; the engagement ended when Saab directors objected. Then they did a deal with the Norwegian government under which they would get cash, and the right to some potentially valuable oil exploration licences, in return for giving Norway a 40% stake in Volvo and expanding its corporate interests in Norway. That particular marriage got as far as the church-gate before Volvo's shareholders vetoed it.

Now Volvo is wondering where to turn next for the **finance needed** to replace its ageing car range. Sweden's own investors look the best bet, but if they don't come up with the Kroner then you can expect Volvo eventually to drop out of the car market, concentrating instead on trucks.

Eager customers, it seems, are still willing to pay thousands of pounds over list-price to jump the two-year-plus waiting queues for a Rolls-Royce and many Mercedes-Benz models. But the **premium market** is not quite as good as it looks.

In anticipation of 'a premium situation' developing, many optimistic investors placed orders early for the new Porsche 928, took delivery, then started advertising their cars at anything up to £5000 above the 'list' price.

The result? A mini-glut of 928s on the exotic market, with prices falling fast.

Austria—the 'forgotten land' of industrial Europe—is hoping to become the site of a vast **new car plant**. The Austrians have been trying to get a car factory going for some time; they even considered a state-run set-up.

RECARO

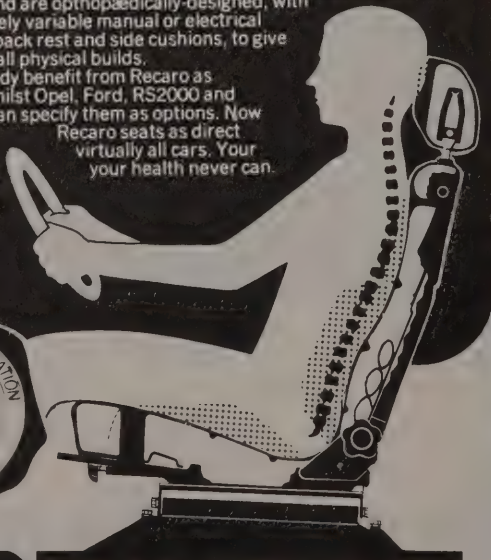
orthopaedically-designed seats

Mass-market car seats are a compromise. They cannot account for the widely varying physique of drivers and passengers, and often contribute to back ache and far more serious permanent vertebral problems.

Recaro seat provide the cure. All models feature steel shell construction for strength and safety and are orthopaedically-designed, with a wide range of infinitely variable manual or electrical adjustments to seat, back rest and side cushions, to give optimum support for all physical builds.

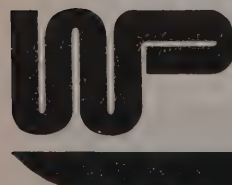
Porsche owners already benefit from Recaro as original equipment whilst Opel, Ford, RS2000 and Capri 'S' customers can specify them as options. Now there's a range of replacements for seats can be replaced; Recaro seats as direct virtually all cars. Your colour brochure and price list your health never can.

Send for free colour brochure and price list



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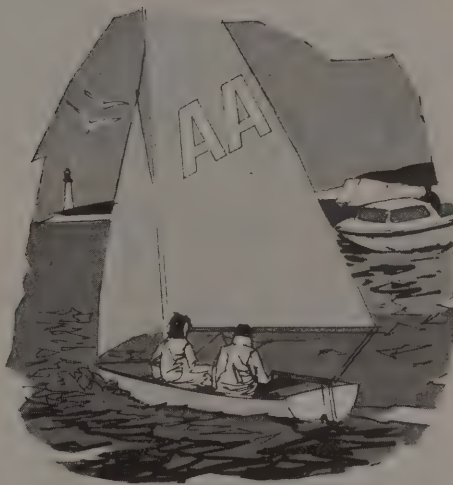
One unique policy covers all their leisure gear, and more...

AA Leisureplan



"My Leisureplan is better value... covers the caravan and much more"

Think of a scheme that gives more cover than the old separate caravan policy - then covers all your other leisure activities as well. That's Leisureplan!



"Leisureplan covers me afloat too...any small craft, powered or sail"

If you run a boat up to 17 ft long, or with a designed speed of up to 17 knots - Leisureplan will cover it. If your craft is bigger or more powerful, ask for details of AA Sailsure.



"Leisureplan leaves folk like us free to enjoy the great outdoors"

At last, a scheme for open air enthusiasts! If that costly tent, sleeping bag etc gets lost or damaged, Leisureplan has it covered. Clothing and personal effects too.



"Sports gear is worth a packet these days. Our Leisureplan covers it all"

Today's sparetime interests - cycling, fishing, golf, riding, shooting etc - all involve expensive equipment. Add it all up and you'll see the sense in Leisureplan cover.

AA Insurance have designed Leisureplan for every Drivereader with a range of open-air interests. Have you totalled up the value of all your sports and leisure gear lately? Try it - the result will instantly set you thinking about insurance. Not the old-fashioned variety that concentrates on one proud possession, but something flexibly in line with today's needs, to cover *all* your interests from caravan to gardening gear.

Leisureplan does precisely this. All you do is tell us the total value of the equipment you want to insure, with any options you want to take up, like 'new for old' replacement or added accidental death cover. Then one premium covers everything against loss or damage, in the field or stored at home, while you or your family are using it, even on a continental holiday.

A folder explains Leisureplan simply, with an equally simple proposal form. Write for a copy, or call at your nearest AA office. Then relax and enjoy those weekends and holidays with Leisureplan behind you.

Snip off this coupon and post it in an **unstamped** envelope addressed to: AA Insurance Services Limited, FREEPOST, Newcastle upon Tyne NE99 2RP.

Please send me folders on the AA Insurance schemes I have ticked:

- ☐ Leisureplan
☐ Sailsure
☐ Motor Insurance

Name.....

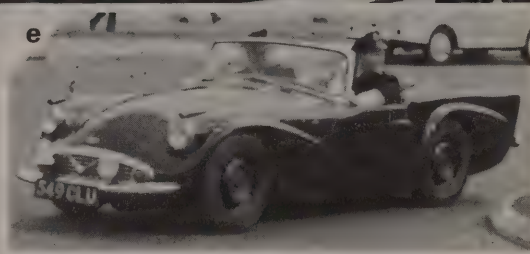
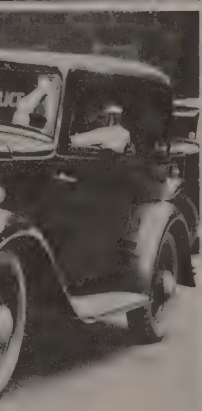
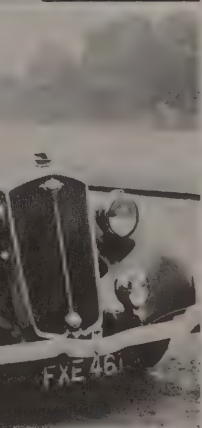
Address.....

Freeport for details →

Old Bill's jam-jars

THE Traffic Department of the Metropolitan Police is 60 years old. What! No cheers? No congratulations?

Come along, now, be fair—if it weren't for these magnificent men in their flying machines, the roads in and around the capital would be less safe, more frustrating for all of us. (Although we wouldn't try to convince the man who's just been stopped by a police 'jam jar' on the Westway.) To manage all this, though, the Old Bill has had to be thoroughly modern in his choice of transport. Here is a selection of London's finest through the ages—can you remember being nabbed by any?



Are you good enough to crack the Code?

THE NEW Highway Code is just one year old—a 25p paperback that every driver has read, at least in part.

True, the revised version contains several new sections, which only drivers who passed their tests in the last 12 months and current learners will—or, rather, should—know. Sadly, however, after that the crash-course questions-and-answers session on the Code that most L-drivers undergo during those frantic 24 hours before they take the test, the great majority rarely again refer to the 'test book'.

So how good is *your* knowledge of it? Try answering the following 20 questions based on the Code—old and new. As a motorist you should know all the answers... but do you?

1 Between what times is it illegal to sound your horn in a built-up area?

- a 11.30pm and 7am
- b sunset and sunrise
- c 12.30am and 6am

2 Even when there are no road-signs, there are three statutory limits for single carriageway roads, dual carriageways and motorways. These are, respectively...?

- a 50mph, 50mph, 60mph
- b 60mph, 60mph, 70mph
- c 60mph, 70mph, 70mph

3 The roadsign with a blue circle and 30 in white figures inside it means...?

- a a maximum speed limit of 30mph
- b a 30-ton weight limit
- c a 30mph minimum speed limit

4 Your car has stalled on an automatic half-barrier level crossing. Your first action should be to:

- a phone the signalman
- b get everyone out of the car
- c run up the track to warn on-coming trains

5 What does the Highway Code recommend as a safe following distance in normal driving conditions?

- a 1ft for each mph
- b one car length for each 10mph
- c 1yd for each mph

a Bean saloon—backbone of the squad from 1921–1926; b 'He went thataway!'—and the 1930 law gives chase in BSA 8hp tricar; c 1939—the Traffic Patrol goes to war in a Wolseley 14/60; d Ford Tudor saloon, complete with running-boards for 1933-style cops'n'robbers chases; e Daimler Dart—speedster-catcher of the 1960s; f the original Flying Squad with flyer—the Crossley tender, being fitted with aerial for air-to-ground observation of traffic at the 1923 Derby; g 1930 and the 'Sweeney' had moved on to 4½litre Bentleys.

6 What is a car's overall stopping distance at 70mph in normal road conditions and with good brakes?

- a 70ft
- b 240ft
- c 315ft

7 Box junctions are designed to keep busy junctions free from traffic, and you must not enter unless your exit road is free, *except* when...?

- a you wish to turn right
- b you wish to turn left
- c the traffic lights are green

8 It is illegal to cross or straddle a double white line in one of the following ways...?

- a to enter premises on the other side of the road
- b to pass a slow-moving vehicle
- c to pass a broken down vehicle

9 What markings on the road would you see at a junction at which you had to give way?

- a one broken line
- b one solid line
- c two broken lines

10 Red-on-white countdown markers at the side of the road indicate...?

- a a motorway exit is approaching
- b your road is about to merge with a main highway
- c you are approaching a concealed level crossing

11 Two yellow strips on the kerb mean...?

- a you must park your vehicle at least 2ft from the kerb
- b you may stop and load your vehicle not more than twice a day
- c no loading at any time during any working day

12 You should flash your headlights only to indicate when...?

- a another driver may exit from a side road in front of you
- b an oncoming driver has left his lights on
- c signalling your presence to another driver

13 If you break down and you have a reflective warning triangle, how far behind the obstructing vehicle should you place it on the road to warn following drivers?

- a 200yd
- b 50yd
- c 25yd

14 How many different colours of cat's-eyes are there on a motorway?

- a two—green and white
- b four—red, white, amber and green
- c three—red, blue and white

YOU NEVER KNOW...

More than three out of every four motorists questioned on the Code by DRIVE didn't know the law on parking after dark. Two out of three were wrong about the various colours of cat's-eyes on motorways. More than two-thirds couldn't identify a common road-sign, and more than half had no idea what the speed limits are...

In our 'straw poll' at motorway service stations and city centres, we put seven questions to motorists... to find that the

majority could answer only two—the regulations on double white lines and litter on motorways. But perhaps the most disturbing result of the poll was that only 40% could give the correct following distance.

One man who knew all the answers admitted afterwards that he was a driving instructor; two others, who refused point-blank to answer any questions, revealed themselves to be lorry drivers. And one showed his displeasure by tearing up the list of questions—heavy-duty clip-board included!

15 'Long vehicle' rear markings must be fitted to trucks longer than...?

- a 13 metres
- b 10 metres
- c 19 metres

16 If you see an obstacle on the motorway—say, an article that has dropped from a lorry—you should...?

- a immediately pull on to the hard shoulder and, when the road is clear, remove it

b leave it to the police

c drive to an emergency telephone and tell the police

17 A roadsign with a bicycle inside a red circle means...?

- a pedal cycles only
- b no cycling
- c beware of cyclists

18 On an urban clearway, vehicles may...?

a stop for up to 30 minutes during the times on notice

b not stop at all during the times stated

c stop for up to two minutes to set down and pick up

19 What is the pelican-crossing light sequence for drivers?

- a green, amber, red, flashing amber, green
- b green, red and amber, flashing amber, green
- c green, flashing amber, red, amber, green

20 Where may you park a car at night without lights?

- a anywhere as long as it isn't on a bus route
- b where there is a speed limit of 30mph or less, and more than 15yd from a junction
- c where there are street lights, and within 15yd of a junction

Answers

today—it's 25p well spent!
below 24, buy a copy of the Code
are learning... or forgetting:
examiner; between 24 and 42, you
you are probably a driving
If you have scored 42 or over:
15a; 16c; 17b; 18c; 19a; 20b
7a; 8b; 9c; 10c; 11c; 12c; 13b; 14b;
rect answer: 1a; 2c; 3c; 4b; 5c; 6c;
Score three points for every cor-



CAR TESTS

Give an exciting, fun-handling small saloon a sexy new body... and you have a car that boy-racers want. Or do you?

Alfasud Sprint 1.5

Price £4500 On the road £4549

If you're prepared to sell cars for £500 less than they cost you to build, you're almost sure to find a market. And if your name happens to be Alfa Romeo, you could have the kind of success that might ruin you.

The Alfasud is the product of a factory that was built solely to provide jobs for southern Italians who weren't prepared to commute north to Turin, and with true-Alfa mechanicals and bodywork by Giorgio Giugiaro (he's *everywhere*, isn't he?), it's as successful as sliced bread. So much so that Alfa, suspecting that there might be up-market buyers prepared to pay real money for more style, went back to Guigario, and—hey presto!—put the Sprint on the blocks. DRIVE put it under starter's orders. Ready? Steady?

How it goes

The Sprint's unusual horizontally-opposed four-cylinder engine produces the same 85bhp as Volkswagen's Scirocco, despite giving away 100cc to it, and after the phenomenal performance figures that we recorded in an Alfasud 1300ti last year, we were expecting great things. But our expectations didn't materialise. Not only was the Sprint markedly slower than the Scirocco, it only just managed to better the figures of its small-engined cousin: 0-60 mph improved by a meagre split-second to 12.2sec, and top speed up by just 3mph to 101mph. It's a testament to the lesser Sud however, that these times still look very respectable compared to most 1500cc sports rivals.

What *isn't* reflected in mere stopwatch times is the engine's delightful smoothness, spinning like a top with the tachometer needle tickling the 6500rpm limit. Together with a slick, close-ratio, five-speed gearbox, and exhaust sizzle that's music to boy-racer ears, it makes the Sprint great fun to drive quickly. It also cruises in a smooth and civilised fashion that puts many straight-laced saloons to shame on the motorway, but falters in low-speed town slogging: like its smaller-engined stablemates, the Sprinter simply isn't cut out for this type of work.

In terms of performance *with* economy, the Alfa cannot match the clever Scirocco; but with overall fuel consumption, over DRIVE's 1000 testing miles, of 31½mpg the Sprint can claim to be the average child in the top class.

Darting down country lanes or slogging round town, it demands a gallon of 4-star every 24 miles,

but the five well-chosen gear ratios eke-out the fuel to more than 30mpg in the rest of our fuel tests, including 70mph motorway stretches. The 11gal tank is easy to fill to the brim, so most owners should cover more than 300 miles between stops.

DRIVE has long admired the Alfasud's well-balanced handling and superb steering, and the latest car confirms its excellence. The Sprint darts down winding country lanes with verve and poise that few cars can emulate; the Firestone radials claw themselves into the road up to seemingly ridiculous limits; and when the hairiest of drivers does at last force the nose of the car to run wide, the steering wheel all but speaks to him about the matter—lift off the throttle, and the nose comes tamely back into line. Enormous fun, extremely safe.

The ride is... well, sporting: knobbly over poor surfaces at low speed, improving the faster one travels. It never attains glide-ride standards, but it is nonetheless acceptable to drivers who are more interested in pace than grace—firmness is never allowed to interfere with the handling.

Even gentle braking brings rather sharp, nose-dipping stops, but steadily increasing the pedal pressure produces an even, albeit steep, progression up to a good best-stop of 98% for a reasonable 60lb effort. Fade can be a problem

HOW GOOD

At-a-glance

DRIVE's verdict on the Alfasud Sprint, taking into consideration its rivals, its price and what kind of car it's *meant* to be

Out of five

PERFORMANCE

●●●●

FUEL ECONOMY

●●●●

HANDLING/STEERING

●●●●●●

COMFORT/REFINEMENT

●●●●

INTERIOR SPACE

●●●●

PASSENGER AIDS

●●●●

DRIVER AIDS

●●●●

ACCIDENT/INJURY SAFEGUARDS

●●●●●●

EASE OF REPAIR/RELIABILITY

●●●●

in arduous use, with pedal pressures rising steadily as the all-round discs heat up; but they are quick to recover. They don't like a water soaking, either, taking six stops to dry out.

The handbrake, though, is one of the best we have met, working alone in an emergency stop with more than half the efficiency of the footbrake, and holding the car rock-steady on a 1-in-3 test hill.

Inside story

Strange push-button door handles, and a steeply raked windscreen and sunvisors on which, when down, tall occupants invariably bump their heads, hardly create a favourable impression on entering the Sprint.

The doors open wide, and stay open much better against wind and gradient than the Sud saloon's; but despite Alfa's attempts to improve the seatbelt runs, they still pose foot-tangling problems for passengers climbing into and out of the rear seat. Once in, though, rear leg- and kneeroom is reasonable for a small sports coupé, even if headroom is limited.

As with most Italian cars, the driver has also to come to terms with a long-arm/short-leg driving position. A rake-adjustable steering column helps, but the only complete cure would be one that adjusts for reach, too. Broad-footed drivers won't love the dainty, narrow inset pedal pads, either...

With the exception of facia-mounted rocker switches for hazard flashers, heated rear screen and panel-light dimmer, all minor controls are governed by two column stalks within convenient finger-tip reach of the steering wheel. That on the left controls all lamps and indicators, the right operates the horn, windscreen washers, two-speed wipers and—strangely—the heater blower. All instruments (large speedometer and tachometer, separated by an oil pressure gauge, water temperature gauge and a small bank of warning lamps) are clearly in view through the small, padded wheel.

Standard Sud seats are plastic with cloth inserts, but Sprint buyers have the exclusive option of spending £70 on the velvet-look seat and door inserts that made our test car's interior seem very luxurious. It did little, however, for the lack of lumbar support that made itself felt on longer journeys. Tall testers found seat-travel generous, but the pedal position left us all with aching calf muscles.

All-round visibility is better than the shape suggests, but the screen pillars obstruct forward view on twisting lanes.

The lid of the boot is unlocked



ALFA ROMEO ALFASUD SPRINT 1.5

Front engine: 1490cc/4cyl, OHC (belt); one Weber twin-venturi carb; 85bhp at 5800rpm
Front drive: 5 gears; 17.6mph/1000rpm
Suspension: front—ind MacPherson struts, coil springs, anti-roll bar; rear—coil-sprung beam axle, Watts linkage, Panhard rod
Steering: rack and pinion, 3½ turns/36¼ft circle; 5½J wheels, 165/70 SR 13 radials
Brakes: servoed discs all round

Parts/repairs (inc VAT)
clutch £48.40 (fitting 4.2hr)
exhaust £61.30 (0.5hr)
headlamp unit £11.80 (0.1hr)
front bumper £36.40 (0.5hr)
laminated windscreen £59 (2.0hr)

oil filter and points £6.30 (0.9hr)
major service 12,000 miles (4.5hr)

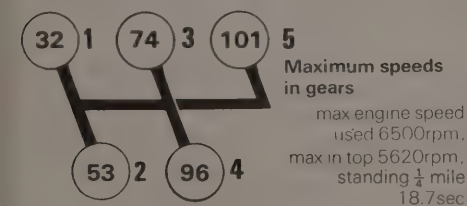
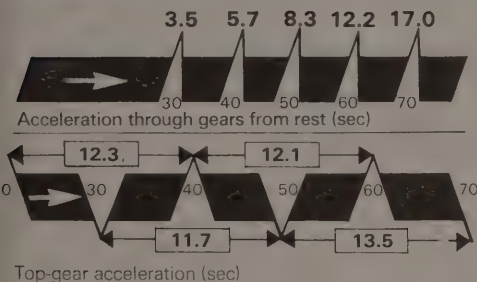
	per year	per mile
Running costs	£726	6.05p
Loss of value	£364	3.03p
Total depreciation	£1089	9.07p
Insurance group	6	

THE RIVALS CLOCK IN

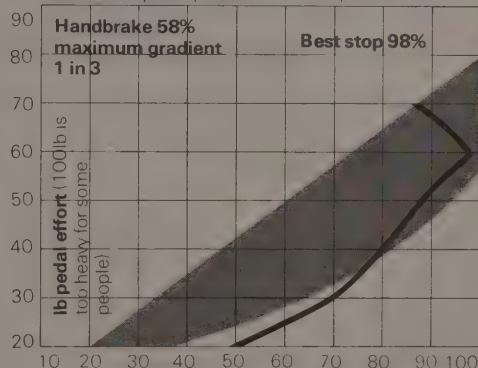
VW Scirocco GLS
Ford Capri 2000S
Honda Accord 3dr
Triumph TR7
Colt Celeste 1600GS

fast

PERFORMANCE



BRAKES—pedal pressures and responses



FUEL 4-star/97 octane min overall consumption 31½mpg effective tank range 315 miles/10gal

Normal range of consumption

hard driving, heavy traffic	24½mpg
short journey, suburban	24½mpg
mixed roads—brisk, 50mph cruising	31mpg
motorway—70mph cruising	31½mpg
quiet rural—40mph cruising	35½mpg

Consumption at steady speeds

30mph	48mpg
50mph	37½mpg
70mph	31½mpg
max mph	19mpg

SAFETY CHECKS

steering: energy absorbing?	Yes	hazard warning fitted?	Yes
front seats: secure mounts?	Yes	interior: well padded?	Yes
head restraint?	Yes	w/screen: laminated?	Yes
front belts: effective?	Yes	doors: crashproof?	Yes
convenient?	No	childproof?	Yes
rear belts: fitted?	No	petrol: spillproof?	Yes
		brakes: failsafe?	Yes
		load sensitive?	Yes

ON-ROAD PRICE (£)	CAPACITY (CC)	FUEL OVERALL (MPG)	MAXIMUM SPEED (MPH)	0-60MPH (SEC)	30-50MPH IN TOP (SEC)	BEST STOP (% g/lb)	OVERALL LENGTH (FT/IN)	MAXIMUM LEGROOM FRONT (IN)	TYPICAL LEGROOM REAR (IN)	STEERING TURNS/ CIRCLE (FT)
5110	1588	33½	104	10.6	9.0	92/50	12' 9"	41½	33	3½ 32½
4539	1993	30½	109	10.9	9.6	100/55	14' 4½"	41	36½	3½ 34½
4015	1602	35	93	14.0	9.8	88/40	13' 6½"	41	36½	3½ 33½
4880	1998	28½	108	10.2	7.4	100/60	13' 4"	42	—	3½ 29½
4249	1597	30½	94	14.0	11.2	88/40	13' 6"	40½	34	4 31½



by a lever that British drivers will find is on the wrong side of the front passenger seat. Once open, it reveals a surprisingly large cavern, which is fortunate as the load area cannot be increased by folding the rear seats (as in the Scirocco). Luggage has to be lifted over a large and chip-prone sill . . . and the spare wheel lurks in a well under the carpeted boot floor, so that a holiday puncture means a lot of unloading. Valuables in the boot are hidden by a blind. Inside, oddments go into a small, non-lockable glovebox and two tiny trays on the central tunnel. Heating is controlled by two levers: one for air-flow, the other for temperature. Unfortunately, our car arrived with the former disconnected. Adjustment of the footwell outlets brought a little warmth to the front footwells, but it was never enough for the cold weather of our test, nor was it what Alfa intended. And rear passengers just had to grin and stamp their feet.

Two vents in the centre of the

facia are of little help in demisting the windscreen edges, but fresh air only can be directed from vents at either end—if the driver doesn't mind frozen fingers. In hot weather, fresh air can also be pushed through the centre vents, and it's pleasant to be able to wind down the back door windows without causing a howling gale through the car.

The Sprint's contemporary design has several safety features built in. We are not happy about the lack of roof padding, however, especially around the front and rear screens, and the seatbelts are so inconvenient that it would take legislation to make many owners wear them.

Living together

During its relatively short lifespan, the rust-reputation that the Alfasud has for itself earned can only be described as . . . well, rotten. Apart from some nasty looking mudtraps under the front wheelarches, the standard of underbody protection and quality

of paintwork has always appeared good, yet still the cars rust.

Last year, Alfa announced new measures to combat its tarnished image, including the galvanising of corrosion danger-spots and pumping oil and wax into box sections. Of this last claim, however our test car showed no signs.

Wet days cover the flanks of the Sprint in road filth, which works its way into door recesses and rubs off on people. Thankfully, the outside of the car is easy to wash. But the interior is awkward to clean, particularly the carpets, and the test-car's velvet upholstery held on to hair and dust determinedly.

Home mechanics will find most routine maintenance and service items well placed, and the helpful handbook and small set of tools will encourage him, too. On the other hand, if the car is maintained by an Alfa dealer, certain service parts—plugs, points, oil filter, for example—are supplied free of charge for 24000 miles, so there's little to be saved by getting your hands dirty. It is part of what Alfa calls its 'Red Carpet' treatment, (You don't have to pay extra for delivery or number-plates, either.)

The Sprint is rated a Group 6 risk—about average for a 100mph sports car—and its depreciation is no better than average.

Verdict

Like most of the subsidised Suds, Alfa's little Sprint is undoubted value for money . . . only less so. It has to be said that buyers with less of an eye for streamlining can have similar engineering, and performance, for £900 less in an Alfasud 1500ti.

And that performance? Great, if you're given to flogging around twisting country lanes; the Sprint is fun yet civilised. In straight-line dashes, however, we were disappointed with its acceleration if not its refinement, and we'd welcome a little more versatility for around-town jogging, too.

And yet—well, a Sud is always tempting. If only its rustworthiness matched its roadworthiness, perhaps even our cynics might lay £4500 on the line.



Fred Pocock, a 50-year-old building consultant from N London, was the new boy in our panel of amateur testers for this issue. Fred's own car is a Ford Granada estate with an automatic gearbox. 'I like space and comfort in my old age,' he told us, 'and I am always carrying building gear, so a big auto estate makes sense for me.'

Fred joined Everyman-panel regulars Denise Bewsy, a 21-year-old office manager from St Albans, Herts, who runs a much-loved (and battered) Ford Cortina 1600GT, and Andrew Perry, a 34-year-old antiques dealer from Knaphill, Surrey, who drives a Peugeot 504 estate.

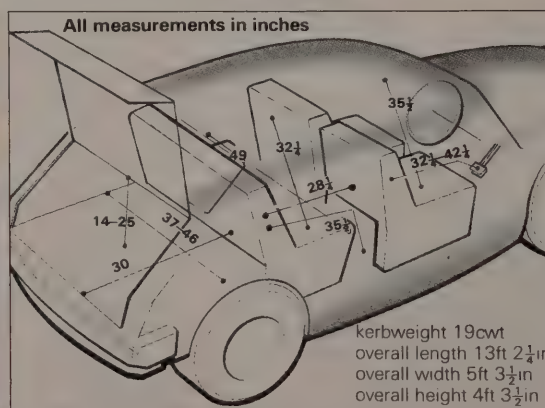
Our Italian v German showdown faced all three amateurs with a difficult decision. After half a day behind the wheel of each, the two men fell for Alfa's beauty, while our lady driver opted for Volkswagen's sports-hatch.

'I was disappointed,' said Denise. 'I had trouble with the Alfasud's off-set pedals—I kept pushing the wheelarch in mistake for the accelerator—and the gear shift's spring-loading was too strong for me, so I went into fourth instead of second and third instead of fifth! In other respects the car seemed to ooze perfection.'

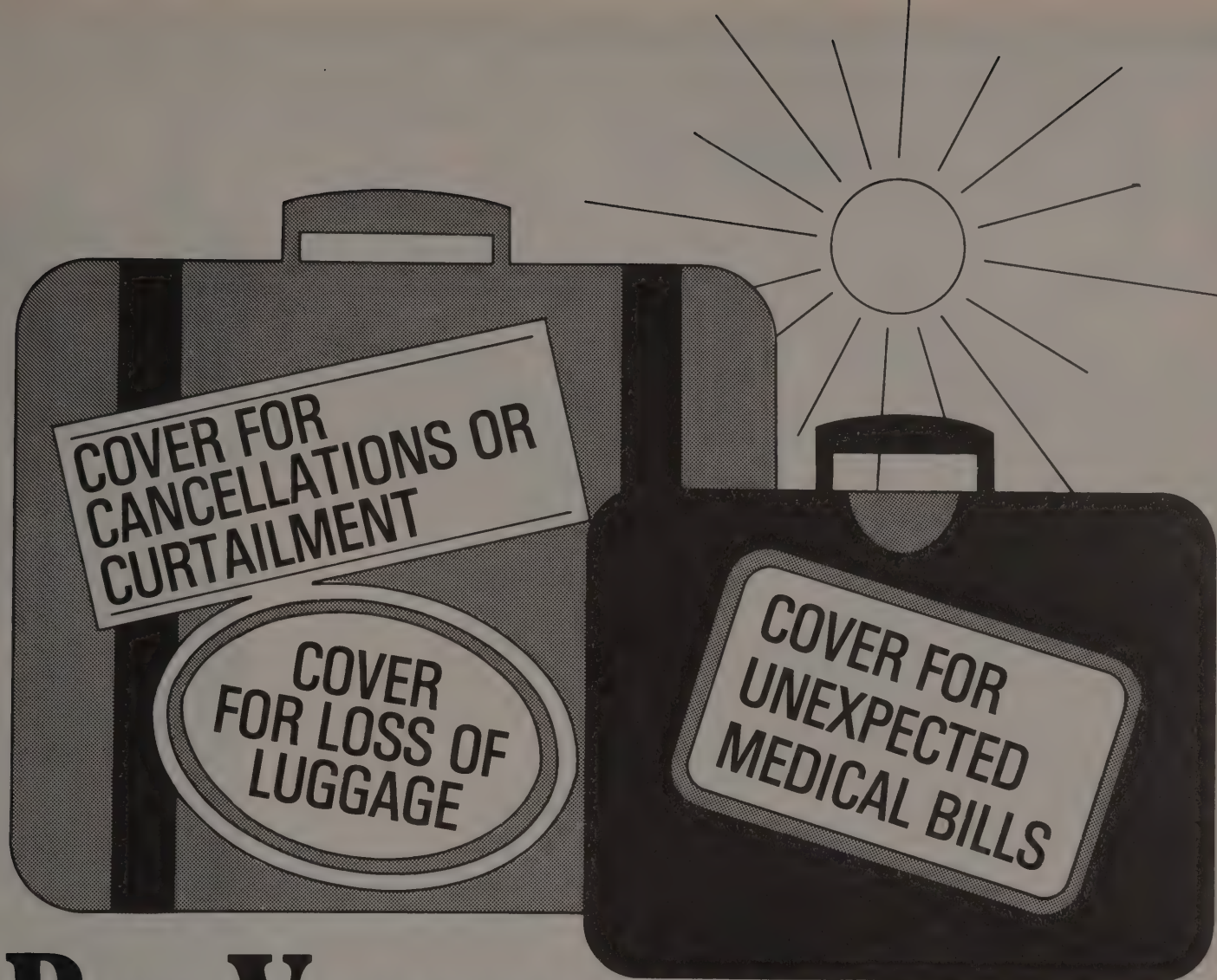
'It's the Alfa for me,' said Fred Pocock. 'It's comfortable, with all the major controls to hand on column stalks—though they do take time to get to know. I admit that the pedals are too close together—in fact, if I had to make an emergency stop using the clutch and brake, my feet would collide.'

Andrew Perry turned his attention to details: 'I liked the lights that warn following drivers that the doors are open, but Alfa ought to do something about the mud that gets thrown up inside the doors . . . I found that driving vision was better than in the Scirocco, but my feet felt as though they belonged to someone else.'

DRIVE professional tester Bob Oxford comments: 'I wasn't surprised that the amateur drivers had trouble with the Alfa's deliberately offset pedals. They're designed that way to facilitate heel-and-toe driving, a technique that's a mystery to many car owners . . .'



Meet the Alfasud's German rival on page 20—VW's Scirocco GLS



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CAR TESTS

As the Beetle era crawled to a close, VW needed a flagship for its new front-wheel-drive range. Enter the Scirocco . . .

VW Scirocco GLS

Price £4995 On the road £5110

The idea was just *too* good: turn Italian whizz-kid car stylist Giugiaro loose on a humble Volkswagen Golf, ask leading German coachbuilder Karmann to put the ideas together, and see how many people will pay cash for flash.

But Volkswagen miscalculated, and instead of being a low-volume, prestige sports car the Scirocco was destined to sell in Germany . . . well, if not quite like the Beetle, then beyond the wildest dreams of its maker.

In Britain, however, the original idea still holds good, and to underline its exclusivity the Scirocco is available only in expensive GLS trim with a 1600cc engine. Has Volkswagen succeeded in turning Golf into wolf in one easy move . . . or is it just a sport for older gentlemen.

How it goes

The Scirocco's Audi-inspired 1588cc engine is specially tuned to produce a cracking 85bhp, and, as in all modern VWs, it drives the front wheels. DRIVE's testers marvelled at the way the car would accelerate from below 20mph in fourth gear all the way up to a test-track top speed of 104mph without missing a beat.

Despite Arctic weather conditions during testing, the car always started promptly on the automatic choke, and ran without a hiccup from the word go: Volkswagen obviously has put time into sorting out the cold-running niggles that we remember from early examples.

Miserly fuel consumption is a major plus for the Scirocco owner, and our 1000 testing miles showed an overall 33½mpg—which tops the figure of such workaday transport as, say, a Ford Popular. And the VW diet of 2-star petrol gives it even more of an economy advantage.

It's a fact that, so far, nothing on four wheels can approach the Scirocco's superb blend of economy and performance. And it isn't just a sprinter, by any means, with long legs and a tank that allows a 270-mile jog between fill-ups, and oil consumption that is too small to be measured even over DRIVE's lengthy test programme.

For drivers prepared to make full use of the free-revving engine, the rewards can come quickly. On our test track straights, alongside an Alfasud Sprint 1.5, it showed the Alfa to be a distinctly second-rate flyer . . . and we even managed to lop half a second off Volkswagen's claimed 0-60mph

time for its own product! The wheel-screaming technique is to drop the clutch at 4000rpm and proceed to gear changes at the 6300rpm mark. (There's nothing to be gained by going 400rpm on into the tachometer's red zone, and for the imprudent there's an ignition cut-out at 7000rpm.) Like many sports cars, the Scirocco does benefit from the occasional 'burn-up', to avoid fouled plugs.

The even flow of power in top gear is impressive, and overtakers who are too lazy to drop a cog should find a top-gear 30-50mph time of 9sec enough for most drivers' needs.

The gear shift is light and positive, apart from mild baulking at third and fourth now and again. It is a pleasure to use it to make the engine work hard on cross-country dashes, and, happily, the gearbox seems to thrive on such treatment. A light, smooth clutch allows demure ambling through town traffic, but is man enough to cope with a 1-in-3 hill.

One considerate tester complained that the accelerator pedal's height forced him to move his seat back an extra notch, making rear-seat space even more cramped. (Other testers suspected that he was more disappointed to find both accelerator and brake pedals unsuitable for heel-and-toe gear changes.

As befits a thoroughbred, the Scirocco's ride is firmer than the

HOW GOOD

At-a-glance

DRIVE's verdict on the Scirocco GLS, taking into consideration its rivals, its price and what kind of car it's *meant* to be

Out of five

PERFORMANCE

●●●●●

FUEL ECONOMY

●●●●●

HANDLING/STEERING

●●●●●

COMFORT/REFINEMENT

●●●●●

INTERIOR SPACE

●●●●

PASSENGER AIDS

●●●●

DRIVER AIDS

●●●●●

ACCIDENT/INJURY SAFEGUARDS

●●●●

EASE OF REPAIR/RELIABILITY

●●●●●

Golf's, but it is still good: it takes a large pothole to jolt occupants. Suspension-wise, the novel trailing-arm system at the rear is quite a step forward over the more commonplace 'dead' axle, and a transverse torsion bar at the front does a first-rate job of controlling roll. Together, they produce a ride-and-handling combination second to that of no coupé on the market; comfort and driveability have been allied with enormous skill.

The sad bit remains the steering: along with the rest of the modern VW family, the Scirocco has a self-stabilising system that guarantees straight-line braking on ice or even with a front-wheel blowout. It's all most laudable, but the price paid is lack of steering 'feel', and that's particularly unwelcome in a car with sporting pretensions.

Having said that, roadholding is tenacious, with the car going exactly where it is pointed. It may not go round corners as magically as an Alfasud Sprint, but it won't be left behind.

At the limits, the nose will run wide, just like a Mini's. But the usual solution of cutting the throttle can have traumatic results on a wet road: the tail can come round with determination. DRIVE's professionals discovered, however, that lowering the recommended front-tyre pressures by 3psi produces a Scirocco that is altogether safer and less dramatic.

Brakes fail to inspire much confidence on Volkswagen's first lady, producing an ultimate crash-stop at a disappointing 92% efficiency for a lightish pedal pressure of 50lb. Heavy-footed drivers will find it all too easy to lock the wheels and slide. Under repeated hammering, the brakes also suffer from fade, but are immune from water.

Inside story

Front-seat comfort in the Scirocco can be taken for granted, and one of our tallest testers regarded the driving position as the best he had encountered. The firm support is a tonic to back-pain sufferers.

The GLS pack includes a centre console housing an oil temperature gauge alongside an accurate quartz clock. The brushed-aluminium fascia accommodates the usual dials plus an essential tachometer, a temperature gauge and a trip recorder, plus all the warning lights a driver could ever wish for. Instrument lighting can be dimmed by a rheostat switch next to the headlamp rocker-switch; and other rockers control hazard-warning flashers and the heated rear screen. Volkswagen seems to have taken note of DRIVE's moans on the Golf test, and has re-angled the screen heater's telltale light. Sadly, our



VW SCIROCCO GLS

Front engine: 1588cc/4cyl, OHC (belt); one twin-venturi carb; 85bhp at 5600rpm
Front drive: 4 gears; 17.5mph/1000rpm
Suspension: front—ind MacPherson struts, coil springs; rear—torsion beam axle, trailing links, coil springs
Steering: rack and pinion, 3¼ turns/32½ft circle; 5J alloy wheels, 175/70SR 13 radials
Brakes: servoed discs front/drums rear

Parts/repairs (inc VAT)
clutch £37.94 (fitting & 4hr)
exhaust £46.33 (2.2hr)
headlamp unit (no bulb) £14.73 (0.3hr)
front bumper £43.16 (0.4hr)
laminated windscreen £149.36 (0.7hr)
oil filter and points £4.38 (0.55hr)
major service 10,000 miles (2hr)

	per year	per mile
Running costs	£662	5.52p
Loss of value	£126	1.05p
Total depreciation	£1100	9.17p
Insurance group	6	

THE RIVALS CLOCK IN

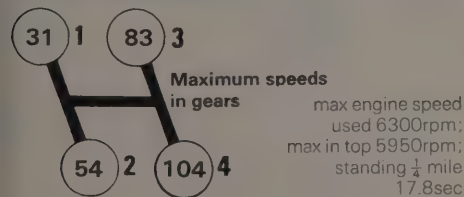
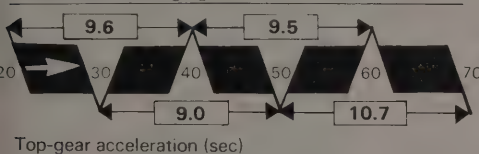
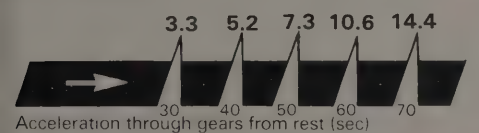
BMW 316
Ford Capri 2000S
Honda Accord 3-door
Triumph TR7
Colt Celeste 1600GS



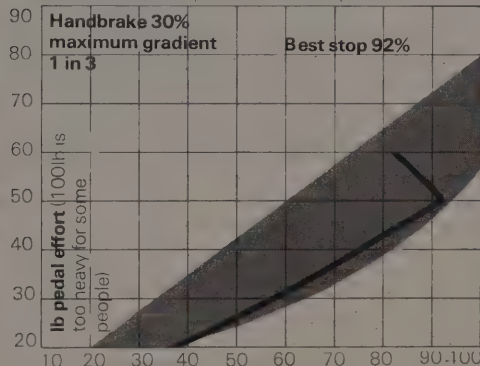
Volks zinger

John Perkins

PERFORMANCE



BRAKES—pedal pressures and responses



% efficiency (ideal car's braking performance falls within central zone—above, too heavy, below, too light)

Fade test pedal pressure needed for 75% stop (ideal car would show no variation)

40lb at start, **40lb** in constant use, **60lb** in severe use

Watersplash immediate recovery

FUEL 2-star/91 octane min
overall consumption 33 1/2 mpg
effective tank range 270 miles/8gal

Normal range of consumption

short journey, suburban	27 1/2 mpg
hard driving, heavy traffic	28 mpg
motorway—70mph cruising	32 1/2 mpg
mixed roads—brisk, 50mph cruising	34 1/2 mpg
quiet rural—40mph cruising	41 mpg

Consumption at steady speeds

30mph	56 1/2 mpg
56mph	41 mpg
70mph	32 1/2 mpg
max mph	17 1/2 mpg

SAFETY CHECKS O = factory fitted option

steering: energy absorbing?	Yes	hazard warning: fitted?	Yes
front seats: secure mounts?	Yes	interior: well padded?	No
head restraint?	Yes	screen: laminated?	O
front belts: effective?	Yes	doors: crashproof?	Yes
convenient?	No	childproof?	Yes
rear belts: fitted?	No	petrol: spillproof?	Yes
		brakes: failsafe?	Yes
		load sensitive?	No

ON-ROAD PRICE (£)	CAPACITY (CC)	FUEL OVERALL (MPG)	MAXIMUM SPEED (MPH)	0-60MPH (SEC)	30-50MPH IN TOP (SEC)	BEST STOP (% g/lb)	OVERALL LENGTH (FT/IN)	MAXIMUM LEGROOM FRONT (IN)	TYPICAL LEGROOM REAR (IN)	STEERING TURNS/CIRCLE (FT)
4849	1573	27 1/2	101	12.9	11.3	100/55	14' 3 1/2"	40 1/2	39 1/2	4/31 1/2
4539	1993	30 1/2	109	10.9	9.6	100/55	14' 4 1/2"	41	36	3 1/2/34 1/2
4015	1602	35	93	14.00	9.8	88/40	13' 6 1/2"	41	36 1/2	3 1/2/33 1/2
4880	1998	28 1/2	108	10.2	7.4	100/60	13' 4"	42	0	3 1/2/29 1/2
4249	1597	30 1/2	94	14.00	11.2	88/40	13' 6"	40 1/2	34	4/31 1/2



shortest road-tester found it obscured by the wheel rim...

Two stalks on the steering column control minor functions: on the left are the indicators and dipswitch; on the right is the wash-wipe—two-speed plus intermittent settings for a single wiper blade that looks very smart but leaves 'blind' triangles on the top corners of the screen. Pushing the righthand stalk away from you gives the rear screen a wash and a few wipes—it won't operate continuously, but good aerodynamics make you wonder if it is needed at all. Perhaps VW should have saved the money and spent it on a standard, high-quality radio.

Harsh, rasping noises intrude into the passenger cabin at 45–50mph—incongruous in an obviously well-made car—and, as if to remind British drivers of the motorway speed limit, rumblings build up at 75mph. Only the Italians, it seems, have mastered the art of giving noise a sporting appeal.

The back seat is strictly for children and diminutive adults: the Scirocco owner has to put up with a lot less space for people and luggage than a Golf man, and he loses two doors as well. Climbing in and out of the back is a job for a gymnast, and the front seat-belts seem designed to make life

harder for less-agile rear-seat passengers.

There is a reasonable amount of oddments stowage, and a useful load space with the rear seatback folded forward. Security-conscious carriers will be pleased that the rear shelf can be left in place to hide luggage. A minor irritation is that, with the boot lid open, the boot-space courtesy light glows continuously, day or night.

Heater and ventilation controls now light up for night identification; there's a three-speed fan to help move the temperature around, but vents that blow air on to the driver's right hand, rather than his face, do nothing to avoid that stuffed-up feeling.

The Scirocco does not score enough safety marks for DRIVE's testers to give it a totally clean bill of health—more interior padding would not come amiss, for instance, and we were amazed to read in the brochure that a laminated screen is a factory-fitted option (a replacement costs a staggering £138 plus VAT).

Living together

If all car makers followed Volkswagen's lead, rustproofing firms would struggle to make a living. Our experts, impressed by the Scirocco's evenly applied, flexible pvc underbody coating, had to

admit that nothing else was needed—praise, indeed. Box sections, however, are given a wax treatment that will need patching up over the years and, in fact, Volkswagen recommends a twice-yearly dealer check. Sills and flanks catch a lot of road dirt, so mudflaps may be worth adding.

The handbook positively discourages DIY attempts at even routine maintenance. It is a pity, for although the underbonnet scene is untidy most jobs are in fact easy. The only topping-up job that presents a problem is... the petrol tank. It's reluctant to take the last two gallons, and spurts and spits at determined fillers.

Outside and inside, the car is easy to clean, apart from the all-too-common fixed carpets: you have to take the cleaner to the carpets rather than the converse.

Leaping showroom prices have kept secondhand values high, so that, while the Scirocco loses money more slowly than an Alfadus Sprint, the cost of buying a replacement new model gives the Italian an economy advantage—if only by a whisker. Insurance is an expensive group 6 risk, which is a reflection of the car's potential in performance and parts prices.

Verdict

There is always a healthy market among motorists eager to buy mutton dressed as wolf—as Ford proved when it turned the Cortina into the Capri. VW's Golf-into-Scirocco trick can perhaps be viewed with less cynicism: it is short of space in the back, and the token hatch and folding rear seat go only part of the way to solving the lack of luggage-room; but there is no doubt that the keen driver can find sheer enjoyment in a Scirocco.

It has to be said, though, that a standard-tune 1.5litre Golf has almost the same power to hold off the pretty Alfadus Sprint, and the same 2-star petrol economy to turn Alfa-owners green with envy. And with a fuel-injected Golf just over the horizon, it surely cannot be *sensible* to pay all that money for the Scirocco's shape and Hobson's Choice of GLS trim.

But if you aren't interested in sense... well, *we'll be jealous*.

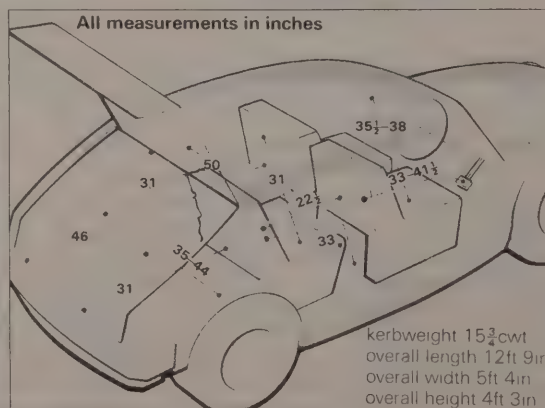


Fred Pocock was the least impressed of our readers' panel with the VW: 'I didn't find it as exciting to drive as the Alfadus Sprint. But really I'm a plodding type of driver, and I was far more comfortable in the Alfa. I couldn't fit my family in the Scirocco, as there's simply no kneeroom in the back. The front seats are good, however, and I liked the controls—especially the single wiper blade. The gear change is pleasant, though I would have preferred a fifth gear. When I first looked under the bonnet, I thought the engine seemed complicated, but closer inspection changed my mind.'

'I was surprised when I bumped my head getting into the back seat,' said Denise Bewsy—'I'd been thinking that the Scirocco was totally perfect. I felt happy in it immediately, and was able to chat without worrying about driving an unfamiliar car. The gearbox is quite superb, and the car cruises effortlessly—in fact, I'm stuck for words to praise its performance. I liked the single windscreen wiper as it gives such a wide view, but the heater is perhaps a bit too efficient—it makes the car feel like a Turkish bath!'

'I can't agree with Denise,' said Andrew Perry. 'I couldn't get into the Scirocco and drive off straight away as it took me quite a time to get comfortable. It's like a glove—slide into it and then wriggle around; though there's enough gadgetry such as the adjustable thigh support to help get the driving position right. I didn't like the single wiper as, although it does clear the screen well, it had a hypnotic effect on me, but I was impressed by the remote control for the door mirror. The Scirocco certainly gave me more of a sports-car feel than the Sprint, and I enjoyed driving it, but I felt happier in the Sprint.'

DRIVE tester Bob Oxford comments: 'Fred may have wanted a fifth gear, but I doubt that the Scirocco needs it. Fourth-gear ratio in the VW is virtually identical to the Alfa's fifth—and the German is both faster and more economical than its Italian rival. Perhaps sporty cars take more time to master than we could give our amateur drivers.'



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MONEY

Travellin'

I TAKE the bare minimum of foreign currency when I go abroad these days—just enough to get by on the first day or two, until the banks are open. Instead, I rely heavily on credit cards and my chequebook, which, backed by a Euro Cheque card, enables me to cash up to £100 a day at banks in most parts of Europe.

This means I am no longer tempted to cash traveller's cheques in hotels, shops or restaurants, which usually give a poor exchange rate. And I've found that ordinary cheques cashed abroad, especially in sleepy village banks, may not roll home until months after I do, and that credit-card bills often straggle back even later.

I still take some traveller's cheques for places where there aren't friendly 'EC' (Euro Cheque) or credit card signs. In the years when the pound was for ever sliding, the shrewd took German marks or Swiss franc traveller's cheques to the Continent, US dollar ones elsewhere. In recent years, with the dollar weakening, this hasn't been such a good idea. But by taking traveller's cheques in the currency of the country you are visiting, you save the commission that banks abroad charge.

Some countries' foreign-currency travel cheques are not a good idea because, if lost or stolen, it can take anything from a month to a year to recover your money—and then only if no one has forged your signature and cashed them. Where it's safe to take cheques in the currencies of countries you're visiting, there's the comfort of always knowing exactly how much cash you have in the money that counts. You also protect yourself against sudden upheavals in exchange rates due to industrial or political crises at home.

To me, this is far more important than trying to be a currency speculator. In any case, we are not allowed to buy foreign notes or cheques more than four weeks before we go abroad, and any we have left coming home must be changed back within four weeks. This is under Exchange Control rules designed to stem speculation against sterling by hoarding foreign currency . . . not that they have ever done the pound much good over the years!

ROBERT HEAD

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Amount of loan	12 Months True interest 22.5% p.a.			24 Months True interest 22.5% p.a.			36 Months True interest 23% p.a.			48 Months True interest 22% p.a.			60 Months True interest 21.5% p.a.		
	Total Repayable	Interest	Mthly. Pay.	Total Repayable	Interest	Mthly. Pay.	Total Repayable	Interest	Mthly. Pay.	Total Repayable	Interest	Mthly. Pay.	Total Repayable	Interest	Mthly. Pay.
	a	b	c	a	b	c	a	b	c	a	b	c	a	b	c
£	£ p	£ p	£ p	£ p	£ p	£ p	£ p	£ p	£ p	£ p	£ p	£ p	£ p	£ p	£ p
200	222.96	22.96	18.58	246.00	46.00	10.25	272.16	72.16	7.56	296.16	96.16	6.17	319.80	119.80	5.33
300	334.56	34.56	27.88	369.12	69.12	15.38	407.88	107.88	11.33	444.00	144.00	9.25	480.00	180.00	8.00
400	446.04	46.04	37.17	492.00	92.00	20.50	543.96	143.96	15.11	591.84	191.84	12.33	640.20	240.20	10.67
500	557.52	57.52	46.46	615.12	115.12	25.63	680.04	180.04	18.89	740.16	240.16	15.42	799.80	299.80	13.33
600	669.00	69.00	55.75	738.00	138.00	30.75	816.12	216.12	22.67	888.00	288.00	18.50	960.00	360.00	16.00
700	780.48	80.48	65.04	861.12	161.12	35.88	951.84	251.84	26.44	1,035.84	335.84	21.58	1,120.20	420.20	18.67
800	891.96	91.96	74.33	984.00	184.00	41.00	1,087.92	287.92	30.22	1,184.16	384.16	24.67	1,279.80	479.80	21.33
900	1,003.56	103.56	83.63	1,107.12	207.12	46.13	1,224.00	324.00	34.00	1,332.00	432.00	27.75	1,440.00	540.00	24.00
1,000	1,115.04	115.04	92.92	1,230.00	230.00	51.25	1,360.08	360.08	37.78	1,479.84	479.84	30.83	1,600.20	600.20	26.67

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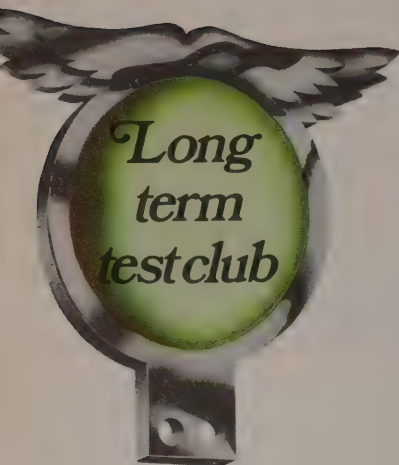
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THE DAY she collected her new Volvo 244DL from a local garage, 26-year-old Sheila Platt opened a bottle of champagne to celebrate. Only she didn't have to provide the bottle; it came with the compliments of Romans, the Volvo dealers of Guildford, Surrey. They also sent her on her way with a full tank of petrol, the cost of which they *didn't* meanly add to her £5317 bill for the 2litre, four-door saloon.

Sheila is without doubt the least-average of the eight reader-motorists who have so far joined DRIVE's Long Term Test Club. For one thing, she is a facial surgeon, and, despite her youth, has the distinction of holding a registrar's appointment at a Surrey hospital. She is also a qualified pilot—a fact that, she

claims, has encouraged her to take more than a passing interest in what car parts are called and what they are supposed to do.

'I haven't the faintest idea *how* to put things *right*,' she admits, 'but at least I have the interest to sit down and study the owner's handbook. The Volvo's is very clear—one of its comforting features. I see that it has space for a service history up to 120,000 miles: Volvo obviously expect its cars to go on for quite a while!'

There were, of course, more practical reasons why Sheila preferred a large, heavy car rather than something more snazzy and lightweight. The most important was that she had already enjoyed three years and 59,000 miles of

virtually trouble-free motoring in her first Volvo 244DL. (She exchanged a Fiat 128 for it in October 1975.) She is also very safety-conscious, as befits a doctor who repairs facial injuries.

'I only feel really safe in large cars,' she says. 'I do about 15,000 miles a year, much of it fast on motorways because I drive up to Lancashire several times a year to visit my family in Bolton. It's cruising comfort that I demand from my car.'

Volvos have been in the Platt family for a long while. Sheila's father owned one for 12 years, 'so I suppose it was natural for me to carry on the family tradition.' When she did try to break with tradition, before buying her new 244DL, she was told by a Ford dealer that the Cortina she

Why a Volvo is a girl's best friend



wanted wouldn't be available for several months, and would by then cost 8½% more.

At Romans, she was given a warm welcome. The salesman offered to take a car to her home for her to test-drive, and insisted on keeping hers for two days after it arrived at the showrooms 'so that it could be brought up to the dealership's high pre-delivery inspection standards'.

It proved to be no idle boast: when Sheila took her brand-new car to the AA's Technical Services headquarters, after its first 280 miles, engineer Bernard Tasker confirmed that Romans had done a good job.

His main criticism was that the driver's door didn't hang properly—a point Sheila had noticed as soon as she drove the car. And an endoscope examination of the bodywork revealed small areas of rust behind the rear wings that had not been corrosion-treated, and that some of the inner faces of the doors had been only scantily rust-proofed. Underbody rust-proofing protection was marred by being too generously applied over the exhaust—the cause of a particularly nasty smell when the pipe was hot.

Tasker also noted that the rear-screen rubber surround had excess sealant at the edges and needed trimming, and that some bright-work trim was insecure. Otherwise, body paint condition was very good, without blemishes.

Clutch and gearbox, transmission and brakes were all functioning properly; but the AA's man criticised the idling speed, which ranged from 800 to 1200rpm, and observed that when the engine was hot it was difficult to restart. In addition, all the tyre pressures were incorrect, and there was slight steering bias to the left, as well as slight excess play on the near-side front wheel bearing. Another small fault was a windscreen wiper blade that fouled the top screen rail.

Praising the general standard of preparation, Bernard Tasker sent Sheila Platt on her way in the knowledge that none of the faults needed urgent attention. So minor were they, in fact, that she forgot to mention several when she took the car in for its first service.

Nonetheless, when Sheila returned to the AA's workshop with the car having covered 1100 miles, Tasker was able to report that the idling speed and performance was now correct. The steering play had also been adjusted, but there was now a slight steering bias to the right.

'I really am very happy with the car,' Sheila said after reading the AA's second report. 'It's a distinct improvement on my first Volvo, and I'm looking forward to driving it for at least three years.'

ROLAND WEISZ

A SEARCH for economy and reliability, a year ago, took Peter and Jackie Murray to their local BL dealer where a dissected Austin Allegro, displayed in the window, was the bait that drew them through the door. A brief test-drive—in a whole car!—clinched another deal for the Foundry Garage in Burnham-on-Sea, Somerset.

A part-exchange offer of £1150 for their 1974 Vauxhall Viva left the Murrays to find £1731.83 to put their new bronze Allegro 1300 Super on the road for 1 April 1978, complete with a year's tax. Peter told DRIVE: 'I didn't even visit another dealer, the offer was so good.'

Would the Murrays' Allegro look such a 'good offer' after a year's motoring? The car was a natural for DRIVE's Long Term Test Club and was immediately placed under the eagle-eyes of the AA's Bristol-based engineers. The first few checks have been well documented in DRIVE since then, so let's jump forward to the following November...

The Allegro returned to Bristol on 27 November, at 7644 miles, and it sailed through the AA checks once again... until engineer Barry Hey took it out on the road. He dipped the clutch at 35mph and went looking for second gear.

The resulting 'graunch' was diagnosed by Hey as weak gearbox synchromesh. He commented: 'I'd strongly advise Mr Murray to go back to his dealer and get the job done before the car's warranty expires. If he had to pay for this to be repaired, it would be very, very expensive. Perhaps, if the car is driven with respect, it may not get any worse, and could even last the life of the car... but it won't get any better.'

Old faults of a badly sprayed rear wing and a glove-compartment rattle were still there; but a dented rear valance had been straightened without even cracking the paintwork. The interior light didn't work, and a sidelight lens had been cracked and DIY-repaired with glue. All the tyres were 'feathering', indicating the need for a wheel-alignment check, and an oil leak was again evident on the nearside drive-shaft oil seal.

Overall, the AA's Hey was impressed by how *clean* everything was—it suggested that Peter Murray was a careful driver, or that the dealer was putting himself out. 'Everything is as it should be. It's a pleasure to examine the car,' he said.

The Allegro had in fact been serviced six weeks earlier at 6000 miles. Said Peter: 'I am very pleased with it. It has come up to all my expectations. I think I get good service because the dealership is small... they always

collect the car and bring it back. I don't spend much time on the car myself: I clean it only once a month because it's a job I hate.'

Just over 2000 miles later, last February, the Allegro made its final visit to Bristol where AA engineer Adrian Charlish discovered that a number of faults were still present. He noted that the bodywork condition was still spoilt by the poor colour-match on the resprayed offside rear wing, and that nothing had been done about the gearbox's weak synchromesh. Said Charlish: 'It is a premature fault, considering the mileage covered. I'd advise Mr Murray to take the car back to the dealer for further investigation and rectification within the remaining warranty period, as this fault could prove expensive to rectify.'

As for the rest—well, the glove-box rattled during the roadtest, and the offside rear hubcap had an unsightly dent, and the speedometer was noisy, too.

According to the temperature gauge, the engine was running cool and it was hard to get adequate warmth out of the heater; Charlish suspected a faulty thermostat. Slight oil leaks were showing round the engine and transmission, but were described as 'by no means undue'. The offside front sidelight was still held together by glue, and the rear tyres were still 'feathering'—a well-known Allegro problem. Charlish confirmed that the tracking was correct.

Peter Murray decided to delay a visit to the Burnham-on-Sea dealer until his next service, due at 12,000 miles. He had been

back at 9000 miles, but only for the prescribed short-service. So far as he was concerned, the gear change fault just wasn't detectable and was therefore nothing to worry about. He had however been forced into one repair: as he returned home after the AA check, a red light glowed on the fascia. 'My alternator packed up... and I think your engineer chap must have been fiddling with it,' he said in all seriousness.

'I didn't stop to investigate what was wrong, because I wouldn't have known what to look for. The garage proprietor told me that the alternator had gone. The next day, he put in a new one—I didn't get a bill. He was extremely helpful, and arrived at my home within two hours of my phone call. As he didn't have one in stock, he took one off a new model in his showroom.'

Peter's Allegro used 264 gallons during its first 9757 miles, which he calculated to be 36.9mpg. And—oh, yes—he did recognise one fault. Said Peter: 'That speedometer is noisy, but I've got used to it now.'

Could any dealer wish for a more uncomplaining customer?

ROBERT OXFORD

In case you missed it...

A year ago, DRIVE's first complaint was about the way the garage had fitted the Murrays' child safety-seat: a washer was missing from a mounting point, causing the nut to fray the car's trim. Another fault was a missing knob from the child-proof lock on the nearside rear door, making it a fiddly job to prevent the door being opened by two-year-old Suzanne...

The bootlid was misaligned and the interior mirror was loose on its mounting; the glove-box rattle was a no-cost 'extra' on the new car; and there was a bad paint-run in the metallic paintwork under the filler cap. The engine idled too quickly, and, worst of

Allegro moderato



all, there was a bad oil leak from the nearside drive-shaft that demanded prompt attention.

Three months later the oil leak had been cured, but the engine oil level was well below minimum. The child's safety-seat mounting and safety lock had both been rectified, and the dealership was promising to question the paint run with a BL Cars representative. The front tyres were showing premature wear, calling for a steering geometry check.

Peter Murray had failed to notice a marked vibration at 65mph. He had also missed a brake fault, found by the engineer in the first minute of his test drive: even gentle pedal pressure pulled the car hard to the right.

Peter confirmed that the garage had tried to fix the boot lid, but when it was adjusted to fit properly it wouldn't lock. It was to remain misaligned throughout the year—but at least it locked.

At 5688 miles, in another two months, the Allegro was still waiting for its first major service, but was looking nice for all that.

The rear wing had been re-sprayed badly and the engineer still regarded it as a 'desirable repair'. Otherwise, all we found was a faulty rear lamp—it needed a new bulb—and a dent in the rear valance.

Fuel consumption was working out at 36½mpg.

'Join our Long Term Test Club,' we invited readers in the last DRIVE. 'Tell us about your experiences in the cars that we have under scrutiny'—and Allegro owners were fast off the mark. Here is a selection of the best; the rest would have left no room for our own man!

Alfred Wallace, Harrogate, N Yorks
Sales representative
Allegro 1300 Super
New: November 1976
Miles: 58,000

I have a choice of British cars within a given price range, but the Allegro was the only car with sufficient legroom for long trips—I am 6ft 1½in. After suffering agonies almost to the point of deformity in two Mk 1 Morris Minors, this was my main reason for choosing it.

My major complaint is the noise—body boom, engine clamour and gearbox whine in particular. An underbody soundproofing kit was only partly successful, but the car has quietened in recent months, for some strange reason—perhaps I've just got used to it.

Reliability is sadly lacking—the car has been a constant source of not-too-serious but annoying trouble. The clutch was replaced twice under warranty, after terrific judders and vibration at moving off from rest. A 'floating' thrust bearing and a softer clutch lining have eased the problem but not cured it.

The carburettor gave problems when a device known as a 'capstat' failed, enriching the mixture. At that time, my main Leyland agent knew nothing about capstats—but he replaced it under warranty...

The steering has suffered from a most annoying knocking on cornering, caused by lower swivel joints that seem to wear rather quickly: the car is now on its fourth set. The first two were replaced under warranty, but the last lot cost me £30. Both front wheel-bearings have been replaced.

Corrosion has taken a constant toll on the sidelights, particularly the offside front: bulbs and housings just rot away.

On the credit side, the battery,

alternator, silencer and rear brake shoes are all the originals. I've benefited from Leyland's optional two-year warranty, and all the warranty work has been done without a quibble. The dealer even replaced a radiator that I hadn't realised was leaking.

Fuel consumption has regularly run at around 40mpg, except when the capstat cut it to 32mpg, and oil has worked out at about 3pt between 6000 services.

All in all, not too bad a car. I am now taking over a new car, and I did think about an Allegro 1500 Special, but decided against it because of the noise factor. I had a Vauxhall Cavalier 1600L on order, but Vauxhall couldn't give a date for delivery, so I have opted for a Chrysler Avenger 1.6GL that I could get from stock.

Horace Endean, Torpoint, Cornwall

Retired teacher

Allegro 1300 Super

New: November 1974

Miles: 24,870

An early disappointment was water leaking into the boot and

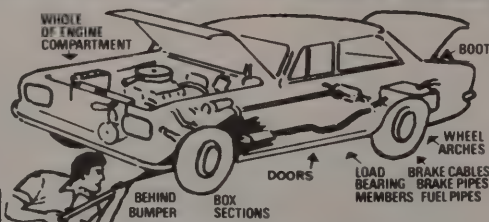
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the driver's footwell. The garage sprayed water over the car, but could find no leaks. I used a garden hose under the wheel-arches . . . and found holes in the seams at the outside edge. I packed these with Plasticine and have had no further trouble!

Servicing has been at 6000-mile intervals, and other repairs included a new windscreen-washer pump and new exhaust system at 13,347 miles, new fan-belt and wiper blades at 17,630, and suspension pumped up at 20,326 miles. The rear Dunlop tyres were replaced by Michelin XZXs at 12,734 miles, and the front pair and spare at 23,323 miles. The rear Michelins are still in good condition.

I've bought 682gal of petrol, giving an overall 36.5mpg, and oil is a not-too-good 650 miles per pint. There was one oil leak (on to my garage floor . . .) at 17,630 miles that was cured by a new seal to the gear change shaft. I've been impressed by the car's reliability (most of my running is short local trips) and engine reliability. Pity about those water leaks, though.

Ian D Penn, Balerno, Midlothian
Local-government officer
Allegro 1300
New: July 1976
Miles: 16,000
After 16,000 miles, I'm still on the

original tyres, brakes and exhaust system—very satisfying, considering the winter driving conditions here, 700ft up in the Pentland hills!

The car has been off the road only for its 6000-mile services. It was recalled in the first year for suggested changes to the rear-suspension rubber mountings, but this, too, was done during a service. The only other problem I've had was one sidelight bulb—replaced under the two-year warranty.

The car has suffered two minor knocks with gate posts, and, despite the dents in the nearside doors, the paintwork hasn't cracked. There doesn't seem to be much rust underneath, although the underside of the petrol tank did show considerable

corrosion at one stage. I treated this and painted it myself and have had no further trouble.

Mpg is just over 30 overall, which I consider good in view of my normal daily journey—eight miles to and from work.

I'm delighted with the car and happy to support BL Cars' products if this is a fair example.

Lionel Lewis, Cardiff
Allegro 1300 Super
New: February 1977
Bought February 1978
Miles at purchase: 9000
Miles now: 17,000
(Mr Lewis's report was in such exhaustive detail that it would have filled these pages! Regrettably, we have had to be heavily selective. Our apologies—Editor.)

The suspension ride height on my

car was incorrect when I bought it; three visits to a Leyland dealer and one call to Leyland customer service finally paid off with the diagnosis: incorrect preload on rear suspension bushes, promptly corrected.

Top radiator hoses seem to last only 15–18 months, possibly because of constant flexing between the radiator and the 'far away' engine.

There is some wear on front hubs, and the wheelbearings and/or drive-shafts may soon require attention.

The instrument housing vibrates annoyingly—a couple of self-tappers rather than a push-fit on the housing would cure this.

The factory underbody protection had been very badly applied under the front wings, so I removed the sidelights (some paintwork around the apertures flaked off!), cleaned the area and sealed it by hand, paying particular attention to the return edge between wings and front panels.

Fuel economy can only be described as very good—30mpg in town, 34mpg on the motorway, 38mpg in rural runs; but oil consumption is poor—under 500 miles per pint, aggravated by leaks around the transmission casing, gear-selector rod and timing-chain cover. Otherwise, the car has been reasonably reliable.



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Passed glories

WHEN A MOTORCYCLIST passes his test, he usually looks around for something bigger than the L-sized, sub-250cc machine to which he has been limited. The attractions of a 350-450cc engine are tempting: under-500cc bikes cost less to insure; they have ample power for all the long-distance, high-average speed touring any luggage-laden rider and pillion could reasonably want; are reasonably light to manhandle, yet heavy enough for reassuring open-road stability; and are neither too expensive to buy nor to maintain. They are the motorcycle equivalents of the 1500cc car. Accordingly, the variety is as wide as the demand—as wide as the differences between Japan's sophisticated Honda 'automatic' and Italy's simple and sporty Moto Morini V-twin.

Honda CB400AT Hondamatic Price £999

IT SEEMS rather quaint, these days, to recall that the first auto-

matic cars in Britain were resisted by 1950s drivers because they didn't want to give up 'control' of their vehicles. And yet it is an argument that rages on today in the motorcycle world. Honda and Moto Guzzi both list machines with 'sort-of' auto transmission, and both are finding that public acceptance is hard won.

Honda is also battling with a hard-core of bikers who, imagining that top speed is some sort of quality guide, reveal a poor sense of values. Admittedly, the Hondamatic is slower in terms of absolute road speed than its five-gear counterpart, but, through town or over winding hill-country back roads, it offers improved safety, an average-speed ability to match the conventional bike, and all with a much more relaxing ride.

Unlike cars, the 'automatic' motorcycle does not rely on hydraulically changed gears, but a constantly varying fluid fly-wheel (or torque converter)

between the engine and rear wheel: as the load on the wheel builds up, so the fluid 'slip' increases, allowing the engine to turn faster without necessarily increasing road speed.

The Hondamatic also offers a special gear for exceptional low-speed power—continual stop-start acceleration in heavy traffic, or pillion-and-luggage-carrying in mountain districts, for example—but, generally, the whispering twin can be ridden for mile after mile with never a thought of anything but road positioning.

Stopping requires a little more attention than normal, since engine braking is negligible, the rear drum is gentle and difficult to lock, and the front disc is more powerful. Although fine for high-speed braking, the front brake needs sensitive handling to avoid 'grab' at low speeds.

The clutch-like lever on the left handlebar is actually a parking brake: with no mechanical connection between the 'in-gear' engine and rear wheel, a hill-parked Hondamatic could roll off its sidestand. New riders can take comfort in the knowledge that this brake cannot be inadvertently activated during the first few cautious rides because of a safety catch that requires simultaneous operation.

Starting, on even the coldest of sub-zero mornings during the test period, was excellent, warm-up was quick and tick-over was totally reliable at all times. The kickstart crank was used only for test purposes.

Comfort ranks high in the Hondamatic's list of charms: silencing is exceptional, so much so that its riders all wished for a more powerful horn because pedestrians and other road users seemed unaware of their imminent arrival; vibration is minimal—the seat is large and comfortable; and suspension movement is generous, if slightly firm for lighter riders.

The greatest benefits of the auto box are discovered in town-traffic riding, but, once on the open road, the other side of its character shows up: battling into strong headwinds or up steep hills, the Hondamatic worked all the gear changes for itself and effortlessly maintained its speed.

The penalty for this is a slight increase in petrol consumption, but the impossible-to-overstress engine and transmission should, in the long term, more than balance this with low repair bills.

Nothing is perfect, however, and the Hondamatic is no exception: there is that too-weak horn; the headlamp main beam is a pencil-like spot without any useful spread; the digital gear indicator light is a night-time rider-

dazzling gimmick; and the exposed drive chain is an old-fashioned, mucky inconvenience.

Probably the most serious fault, however, lies with a finish that, while pretty enough, is obviously of a type that needs a dry garage and constant cleaning in winter.

DIY owners will find the Hondamatic easy to service, especially with electronic ignition doing away with contact breaker points; the engine is a simple overhead camshaft unit with screw and locknut-adjusted valve clearances.

There may not be many Hondamatics around, but that is a reflection of motorcycling opinion, not performance quality. As yet, the two are strangers to one another...

Moto Morini 3½ Strada Price £1235

IF THE HONDAMATIC is the bike equivalent of a Ford Cortina automatic, then the Strada is an Alfa Romeo: too commercial to be truly exotic, but special enough to have a cult following... and to be disliked—even ignored—by those who judge quality on a purely material scale.

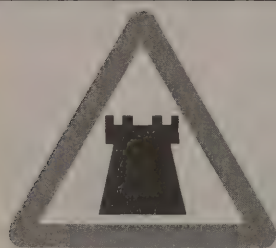
The Strada is the touring 350 of a range that runs from 125cc singles up to 500cc twins. It also has a scarlet-liveried sister, the 3½ Sport, but we decided to forego its racy pleasures for modest efficiency.

In contrast to the growing trend for increasing complexity, the Strada's engine is remarkably simple yet modern: Herron-type combustion chambers in the piston crown, topped by pushrod valves powered by a single belt-driven camshaft.

Simplicity is the keynote, partnered by low weight that makes the Strada a little gem in the traditional Moto Morini mould. Back in 1963, when Honda's mighty Grand Prix teams were conquering all, mini Moto Morini came up with an amazing single-cylinder 250 that very nearly beat Honda's six-cylinder racer to the 250cc World Championship. The Strada reflects this philosophy in both feel and performance. On a straight road, it is no faster than its rivals; but add a curve or two, and its special qualities shine through.

Exactly how the Strada corners is nigh impossible to describe, but the exit from the first bend will leave any rider wanting to do it all over again. Before long, however, he will appreciate that it isn't his ability that has so miraculously improved, but that the machine itself is so supremely agile. And this praise is no boy-racer worship: unusual stability and fine handling make a terrific contribution to safety.

Not surprisingly, the Strada



INSURANCE Insult to injury

NO ONE knows how the accident happened, still less the sole person involved. Conditions were a little damp underfoot, but the road was clear and there was nothing really to worry about. Two witnesses said that one minute the motorcyclist was all right, the next that he was out of control, jumping the verge and heading for a tree.

The tragic outcome on the rural W Midlands road, early last autumn, was that the rider, 17-year-old John Harris, lost an arm.

True, money can never compensate for something like that. But it can help to take away some of the anguish. 'How lucky,' thought John, 'that I paid the extra to be comprehensively insured.' His disappointment when the insurance company told him that his

injury claim could not be met isn't hard to imagine. Comprehensive cover it may have been, the company explained, but motorcycle insurance excludes any kind of personal injury to the rider.

'I just couldn't believe it,' John recalls. 'I knew my Dad was covered for personal injury on his comprehensive motor insurance, and I naturally assumed that I had the same protection.'

Things might have been different had he been in collision with another vehicle: it's possible he could have claimed off the driver's insurance. And the chances are that he would have been successful had he been a pillion passenger: 'He would only need to have shown that the rider was 1% to blame, and the insurance company would have paid,' says AA Insurance Services development officer Eric Sydenham.

For a rider in cases like John's, where no other party is involved, the only sure way to obtain cover for the loss of a limb or an eye is to take out a separate personal-accident policy. But, according to motorcycle dealers (who often act as insurance intermediaries and agents), many motorcyclists, especially teenagers, are either oblivious to the fact that they don't have personal-accident cover... or purposely ignore it to save a few pounds.

has few of the creature comforts common to modern bikes, but, over long periods, its unceasing ability to please, to do the right thing, affects—even refreshes—the rider.

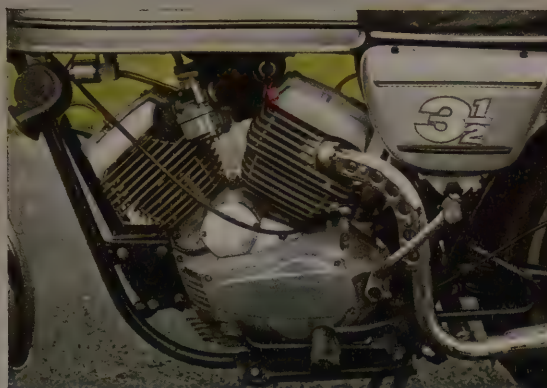
Most of DRIVE's testing was carried out on a six-month-old bike with kickstarting only, but we also dabbled with an electric-start model. Both fired well, but the kickstart's crank encouraged riders' heels to snag awkwardly on and unfold the pillion rest. Doubtless, the electronic ignition helped cold combustion.

The cheapest 2-star petrol is good enough for the Strada, and it uses precious little, too. We just failed to touch 100mpg, but gentle acceleration on a 320-mile legal-speed journey at an average 36mph returned 88mpg.

The controls are light and sensitive, especially the clutch that runs dry in its own air-cooled box beneath the right-side engine cover, and the disc-front/drum rear brakes are good.

As with most Italian motorcycles, the Strada's great heart is spoiled by thoughtless inattention to detail: the seat is too soft and thin; the headlamp is unforgivably dim; the finish isn't up to the rigours of British winters; and the switchgear is positively dangerous—the main lighting switch works parallel to the dipswitch, so that changing from dipped to main beam runs the risk of a total blackout. With the heavy gloves needed during DRIVE's cold night ride, this happened so often that the main lighting switch had to be

HOW THEY MEASURE UP	HONDA	MOTO MORINI
Engine	Air-cooled ohc 4-stroke twin	Air-cooled ohv 4-stroke twin
output	30bhp at 8000rpm	39bhp at 8200rpm
Transmission	Hydraulic torque converter 2 manually-selected gears exposed chain	6-speed exposed chain
Kerbweight	414lb	348lb
seat height	31in	30in
max width	29½in (handlebars)	26in (handlebars)
max length	84in	83in
Fuel tank	3.08gal (inc 0.7gal res)/ 138 miles (inc ½ res)	3.25gal (inc 0.37gal res)/ 204 miles (inc ½ res)
Mpg—overall	57	71
quiet use	71	92
suburban use	47	72
brisk use	55	66
hard use	44	62
Performance—max	83mph	91mph
0–50mph	8.8sec (1st gear only)	7.2sec
	11.6sec (2nd gear only)	
30–50mph (top)	5.9sec	11.8sec



Clockwise from top: Hondamatic's left-hand lever is a parking brake; controls include gear indicator; Strada's vibration-free V-twin.

taped permanently on for safety.

Six gears look like a lot of fun on a specification chart, and, on the 3½ Sport at least, they fulfil some speedy purpose. On a torquey little tourer such as the Strada, however, constant climbing up and down the six cogs is too much; four would do very

nicely. Fortunately, the gear ratios are perfectly chosen, and the actual changes, with or without the clutch, are a pleasure.

The Moto Morini factory produces a mere 10,000 motorcycles a year, and only a fraction of these come to Britain, so aficionados cannot expect to enjoy a countrywide network of servicing depots. There is at least one in every British city, maintaining a stock of the usual spares,

but only the Solihull, W Midlands-based concessionaire has the entire range.

The Strada's price is a reflection of its rarity more than anything else, but the quality is there, too. It's simple enough to ease the conscience of the DIY-buyer, yet fun enough to satisfy most bikers' dreams. In fact, it even looks like a two-wheeled Alfa—and for a third of the cost.

DAVID MINTON



UPSET BY the chaos he was causing, the driver of the car that had stalled at the lights tried to ignore the blaring horn of the car behind. Eventually, he could stand it no longer. With a look on his face familiar to every motorist who has ever been wronged, he got out of his car and walked back to the other driver. And said, in measured tones: 'If you would like to get my car started, I'd be very pleased to press the horn for you.'

Provocative? Aggressive? Certainly the scene had the makings of a confrontation, with voices raised. But the joke took the steam out of the situation.

Similar incidents unfortunately do not always end so amicably, and leave a trail of bad feeling and damage behind. And, what is all the more disturbing, they often involve decent and normally peaceable people.

Take the case of Gerald Bysh, a retired civil servant from Tunbridge Wells, in Kent. He was cautiously edging his Ford out to cross the A21 London-Hastings road, near Lamberhurst, when a Rover, its horn wailing, thundered down on him 'from out of nowhere'. Bysh reversed a couple of yards back into the side road to let the Rover pass, then heard it screech to a halt. 'Leaving the door swinging wide, its driver plunged towards me,' says Bysh. 'He wrenched open my car door and, fuming and spitting with rage, pressed a clenched fist into my face. He was a big chap—6ft plus—and very irate, and he literally exploded with invective, saying that I wasn't fit to

be in charge of a dog, and telling me that I could have been the cause of his death.

'My insides turned to jelly, and to get out of what was an extremely nasty situation, I made out that I was a foreigner and didn't understand him. Cursing, he slammed my door and drove off.'

Gerald Bysh may have been in the wrong, marginally. But what if he had retaliated? It could have ended in hospital, or in court.

Anger and frustration on the roads can take many forms, and often in the end serve only to make the drivers involved look foolish. Take the angry man who, prevented from getting to a motorist by locked doors, walked round the 'offending' car kicking it on all four sides... Or the driver who, outraged by oncoming undipped headlamps, turned round, gave chase and, when he'd forced his 'adversary' to a halt, strode over and set about smashing the car's headlamps with a jack... Or the baulked taxi driver, in London's Aldwych, who ran up to a motorist in a traffic jam, reached through the open window for the car keys—and flung them out of sight down the street.

Then there was the sports car driver, on the M4 going west, who apparently angered the driver of a Ford estate by driving too close behind as both approached the Theale turn-off: halfway up the exit road, the Cortina was braked hard and hurled to the right to block the road, and its driver and a burly companion leapt out, ran back to the luckless sports-car owner and abused and insulted

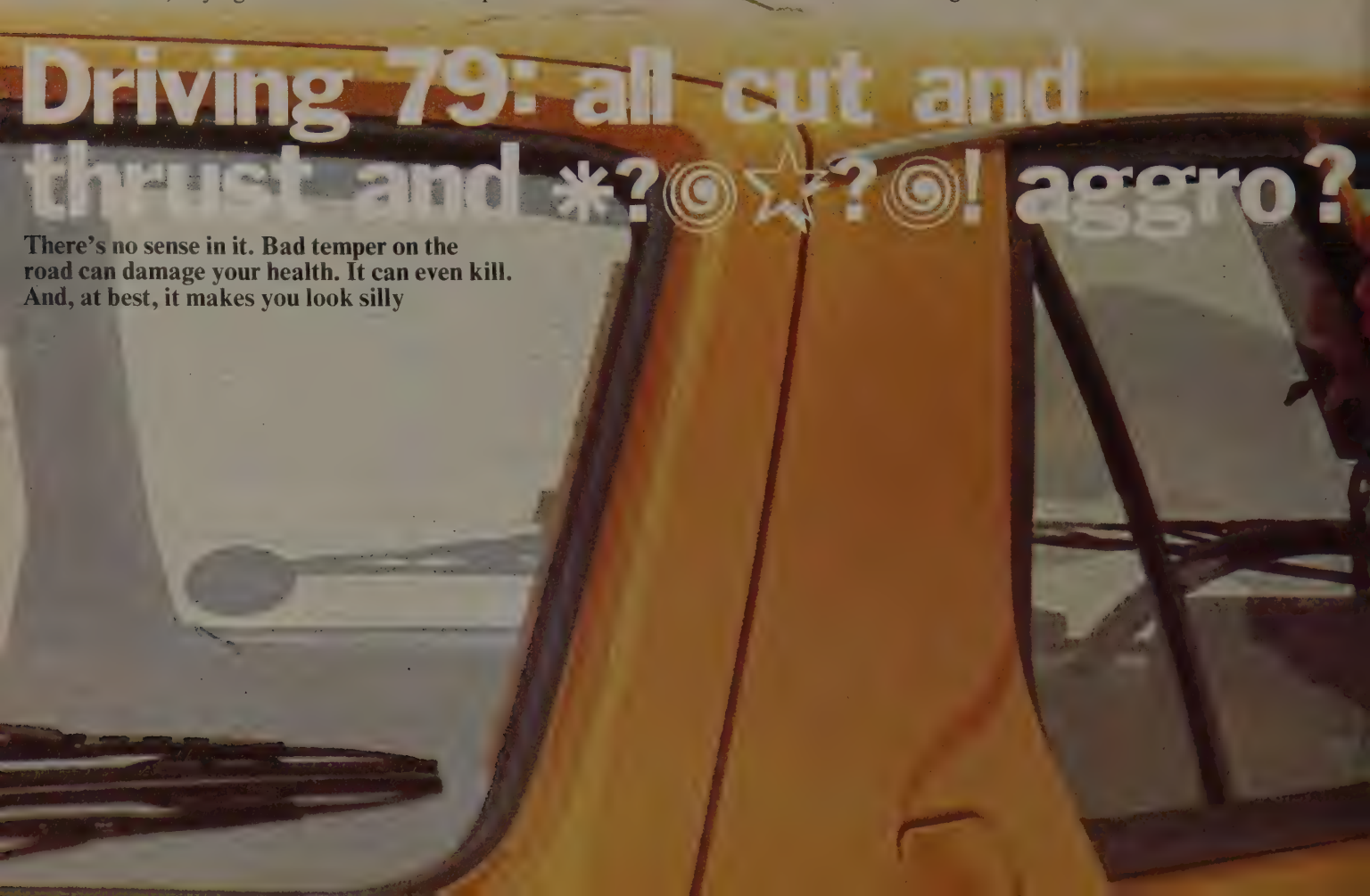
him and his wife... Another motorist was pursued for three miles along the A4, the following driver blasting the horn and gesticulating wildly, after a traffic-lights incident in which the first driver was thought to have made a 'racing' start to get ahead.

In east London, the driver of a glass-fibre car incurred the wrath of another who tailed him, and then, in dense traffic, ran alongside and started shouting about being 'cut up'. Alarmed, the first driver locked himself in the car... and accelerated away from trouble as his muscular antagonist literally wrenched the driver's door handle out of the glass-fibre bodywork! And in Leicester, one quiet Sunday afternoon, two drivers had a fist-waving, mobile argument for several miles, and then, at traffic lights, leapt out to square up to one another while passengers, including children, screamed and wept...

A frequent 'battleground' is the motorway, where many a driver using the middle lane has been pestered by an impatient driver behind because a stream of traffic in the fast lane prevents him overtaking. When finally he is free to zoom past, the 'baulked' driver will pull in sharply, and dangerously, to the inside lane, to teach the slower driver 'a lesson' in motorway discipline. And every driver surely recognises the menace implicit in the action of the driver who thunders up behind and hangs on within a couple of feet of the car boot, revving his engine... and most have seen what

Driving 79: all cut and thrust and *?©☆?©! aggro?

There's no sense in it. Bad temper on the road can damage your health. It can even kill. And, at best, it makes you look silly



happens when the intimidated driver warns the other to back off by touching the brakes. More aggravation.

Invariably, it's a minor incident that sparks off an ugly scene: inadvertent cutting-in, carelessness, loss of concentration, late and momentarily dangerous braking, slow reactions at a junction or lights, failure to close up a gap in a traffic queue, hesitation at a busy roundabout, 29½mph in a 30mph zone. (Embarrassment for the impatient driver who recently beeped a slow-moving brown Cortina leaving a motorway, and watched with consternation as a blind unrolled in its rear window to read POLICE!) And, obviously, since the days of the man with the red flag, drivers have been irritated and frustrated by the unthinking and incompetent actions of other road-users.

The rather worrying thing is that, as the pressures of life have increased, drivers' actions and reactions have become so much more extreme. There's not only a regrettable lack of courtesy and consideration in today's difficult and delaying situations . . . there appears to be a lack of self-control, too.

Former Scotland Yard commander Fred Pennington, ex-general secretary of the Association of Chief Police Officers of England, Wales and N Ireland, says that even the most reasonable, law-abiding citizens can sometimes undergo a sort of Jekyll-and-Hyde personality-

change when they get behind the wheel of a car: 'Angered, they will take risks totally out of character with their normal lives, often showing a complete disregard for the law.' And Dr Meyer Parry, a former psychologist at Strathclyde University, has studied the behaviour patterns of drivers in different age groups and found that the most aggressive are aged 17 to 35. They chase, drive at other vehicles, and may even try to nudge cars off the road.

Of 382 drivers questioned by Dr Parry, a quarter said that they had given chase to a driver who had angered them; 8% had actually been involved in punch-ups with other motorists; and 15% admitted to feeling, at times, that they could 'gladly kill' other drivers.

Normal, everyday conventions of behaviour can, it seems, wither in the privacy and isolation of the car. Says Dr Harry Kay, vice-chancellor of the University of Exeter: 'In the solitude of their tin boxes, some drivers become far more aggressive than ever they would be in face-to-face confrontations.'

Dr Ivan Brown, assistant director of the Medical Research Council's applied-psychology unit at Cambridge, believes that Britain's road system must take some

of the blame: 'Where, for example, a three-lane motorway suddenly reduces to two lanes, an enormous amount of frustration is caused. After travelling along quite happily, drivers suddenly find themselves in conflict . . .'

Surprisingly, perhaps, mini-roundabouts have helped to calm the nerves of keyed-up motorists. 'Far from being aggressive, they become extremely helpful to each other,' observes Dr Brown. 'It's a case where road designers seem to have found an encouraging solution to an otherwise intractable problem.'

Drivers don't take out their anger only on other motorists, of course. Abuse is frequently levelled at traffic wardens and carpark attendants. According to Leslie Moody, general secretary of the Civil Service Union, which looks after the welfare of wardens, the behaviour of some motorists is absolutely abominable.

'Every day of the week,' he says, 'a traffic warden somewhere is subjected to verbal or physical assault. We've had them carried 50yd on the bonnets of cars, and even chased on the pavement by cars. They get black eyes and have their feet run over; and their books of tickets are torn up. We manage to bring prosecutions in about two dozen cases every year, but it's only the tip of the iceberg.'

But even that is perhaps preferable to the reaction of one frustrated driver who was unable to overtake a car because of the way it swerved about in front of him. When the two stopped at traffic lights, he wound down his window and, pulling a gun from the glove-box, shot the guilty driver through the head.

It happened in Houston, Texas, where anything can happen, and often does. But could it some day happen here?

JIM BUSH



Don't go away without the AA



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B

C



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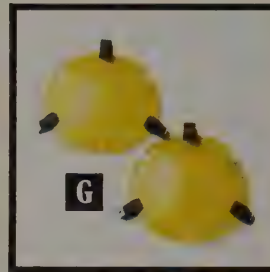
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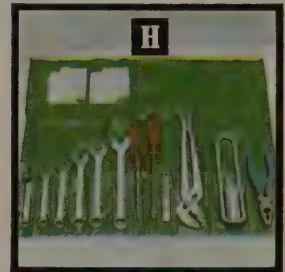
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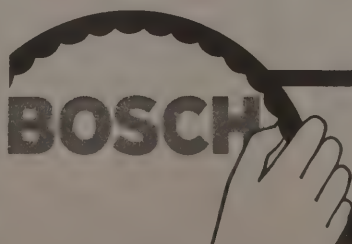


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BOSCH



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ROBERT BOSCH LIMITED, WATFORD, HERTFORDSHIRE

JOHN McNEALY drives a 1964 Triumph Herald; not the sort of machine to make insurance companies blanch. He's 32, and a property repairer in Southport, Lancashire; and there's nothing in that, either, to make anyone mark him down as an unusual risk. So, when he went to West Lanes Insurance Brokers for a comprehensive policy, he was easily accommodated: a clerk filled in a form for him on the spot, and John drove off, insured with the Pennine Insurance Company.

Or was he?

One accident later, John was faced with a damage claim for £309 . . . and a flat refusal to pay from the Pennine. Certain 'material facts', it said, hadn't been disclosed in John's original application.

The problem was, Pennine's low rates are quite fairly offered for certain risks only: the average sort of driver, driving the average sort of car. It wants no sports cars, no young or bad-record drivers . . . nor people in certain jobs, like publicans, bookmakers, journalists and musicians.

Nobody had pointed this out to John McNealy, because it obviously didn't affect him as a *property repairer*. But it did affect him as a *musician*, for John earned pin-money playing guitar in his free time. That, said Pennine, was a 'material fact', and it wouldn't have accepted him as a risk had it been disclosed.

John McNealy hadn't been trying to hide anything. He wasn't to know about

Insurance brokers: the men in the muddle

Pennine's list of unacceptable risks. His brokers, on the other hand, did know—or should have known. He sued the West Lanes and won. The court, and later the appeal court, agreed that the brokers should have checked that McNealy didn't fit any of Pennine's proscribed categories. It hadn't done its duty by its client or its insurance company.

CAR INSURANCE is something of a jungle. By law, every motorist has to have cover, and there are around 150 insurance companies and Lloyd's syndicates touting for custom, with different-price policies ranging from the very general to the very specific. In the London area alone, for instance, there can be as much as £40 difference between comprehensive policies on a humble Mini.

In this kind of 'supermarket', it must

make sense to shop around. But most of us don't. Instead, we rely on someone else to sort things out for us: brokers, consultants, specialists, solicitors, bank managers, car salesmen. For every insurance company, it has been estimated, there may be as many as 200 such intermediaries—25,000 in total, each seeking our trust, and our cash.

And it's a trust that can be misplaced, leaving us out of pocket and even dangerously unprotected.

Insurance intermediaries—and it's important to call them that, since the term 'broker' is now specifically defined by parliament—have a delicate job involving dual loyalties. When they are making the initial proposal, getting what are termed the 'material facts' from the motorist, they legally are *his* agent. But this responsibility changes quickly once the motorist accepts



GREAT ESCAPES

Walking the Waters

NEARLY 2000 years separate Caractacus and Queen Victoria, but there is one way that even the most out-of-condition holiday-maker can bridge the historic gap within three hours, at a moderate walking pace. For that's how long it takes to walk from the Celtic chief's earthen fortress of British Camp to Worcestershire Beacon, where the Grand Old Lady once surveyed one of the finest panoramas in England. It must also have been one of the few times she rode on a donkey—a beast called Moses.

Today, the only means of trans-

port along the Malvern Hills is shanks's pony, but, although there are a few lung-straining slopes, most of the eight or so miles is along a well-marked trail not likely to create thrombosis in the legs of motorists used only to the parade grounds of filling-station forecourts. Which is why I choose these rounded, undulating hills in preference to those tougher, Commando-type National footpaths, such as the Pennine Way, for a walking holiday for anyone who prefers the back-up of a car: there are parking places all along the Malverns on the lower slopes.

And there couldn't be a richer selection of charming little resorts at which to stay, mostly within the shadow of the hills, or a wider variety of accommodation—from first-class hotels to country apartments and farmhouses. There is Malvern Link, West Malvern, Malvern Wells and Little Malvern, let alone Great Malvern, one of the best-preserved Victorian spa towns.

During the last century, the titled and fashionable poured in, many to take the famous 'Water Cure' imported from Austria by Doctors Wilson and Gully. Officially called hydrotherapy, part of it involved wrapping patients in wet sheets and pouring water over them . . . 'treatment' began at 6am!

If that wasn't enough to dampen their passions, Dr Gully made

sure that they didn't indulge in any 'nonsensical love' by keeping the sexes apart in separate boarding-houses. But he built a connecting passage between them for himself and his staff that is still there, and still known as the 'bridge of sighs'.

Today, anyone can take Malvern Water anywhere: the Queen always carries some with her on Royal tours overseas. Still bottled nearby, it doesn't actually have any vitalising mineral in it or, as another doctor put it, according to an old rhyme: 'The Malvern Water says Dr John Wall, Is famous for containing nothing at all.'

Hope End lies hidden in a deep glade on the Herefordshire-Worcestershire border, a stanza's throw from the Malverns. The view must have inspired Elizabeth Barrett Browning, whose girlhood was spent there—either that or the amazing Arabian Nights palace that her father built among the oaks and half-timbered English cottages—from a fortune made out of the slave trade. Hardly any of it is left, but I fancied I was dreaming when I pulled aside the curtains on my first morning there and gazed at an Eastern minaret across the courtyard.

A flock of Nubian goats being milked added to the illusion. They proved a more recent innovation—part of the health-food attrac-

tions introduced by John and Patricia Hegarty, who have restored a Queen Anne-style house attached to the Oriental remains and added extremely comfortable holiday flats.

They grow a rich variety of organically fed vegetables and fruit in the Barrett's old, walled kitchen garden, including grapes and nectarines and every kind of herb—all for sale; but the Hegartys will also cook—and deliver—a selection of hot meals for guests, including meat dishes.

Everywhere you wander in the tree-lined grounds or beside the carp-filled lake, you walk in Elizabeth's footsteps. Or you can walk two or three miles to the Malverns themselves, across fields and along narrow country lanes.

It could have been the health foods or simply the miracle of discovering that my feet could do more than just push car pedals that made me hike many miles more than I anticipated. I wore holes in my shoes . . . but not as big as the holes I would have worn in my wallet from buying petrol.

BILL GLENTON

The Hope End apartments cost from £40 a week low season, with a separate cottage in the grounds costing from £30 a week off-peak. For details of other accommodation in the area, and information about the Malverns, contact the Heart of England Tourist Board.

a quote and an insurance cover-note is issued. Then, an intermediary is legally the agent of the insurer—the company or Lloyd's syndicate accepting the risk.

The difference is crucial: an insurance company accepts a risk on the basis of the information it receives about a motorist, his car, his driving record, the use the car will have, where it will be kept and the cover that's required. If any fact is wrong, it can repudiate any subsequent claim made on the policy.

As Jack Smith, head of the AA's Head Office legal department, points out: 'Quotes are often lower when the claim can be more easily repudiated. But it's often not until a claim is made that questions start to be asked that should have been asked in the first place—by the broker or intermediary.'

John McNealy knows the feeling...

Should the motorist be able to rely on a broker to know what facts may be 'material' in an insurance proposal? 'Yes, of course he should,' says John Smeaton, chairman of the motor executive committee of the British Insurance Brokers Association (BIBA). 'The onus should be on the broker to tell the client of particular clauses in a policy. He should know the right questions to ask.' And brokers who belong to BIBA, Smeaton points out, have to comply with professional requirements that include an indemnity against professional ineptitude.

However, the whole discussion about insurance intermediaries calls into question the precise role of these third-parties. Who are they? And what they are meant to do?

Since the Department of Trade and Industry got a grip on insurance companies in the wake of disastrous failures and blatant fraud, there has been clamour to tighten up on the broking business. For apart from professional incompetence, as in the case of McNealy, some vendors of motorists' protection have been found guilty of considerable sharp practice—of over-quoting and pocketing the difference; of under-quoting to get business, and charging motorists extra later; of adding fees, disguised as premium increases.

'Insurance companies... aren't going to worry too much about who sells their policies if he produces income'

JOHN SMEATON, BIBA

In 1977, the government did in fact try to tidy up the business with the Insurance Brokers (Registration) Act: a registration council was set up, with which brokers, after satisfying certain conditions, were required to register. (After October 1980, any unregistered intermediary will be unable to call himself a broker.)

It was a gesture that promised a lot but in reality has achieved little. 'It's not a cynical view to say that, for the motorist, little has changed,' says Mike Saunders, motor manager of AA Insurance Services. 'All the Act does is distinguish those who

have knowledge from those who may not.' He stresses *may* because there is no compulsion whatever for an insurance intermediary to register, and the difference between one person offering insurance and the next may turn out simply to be one of terminology.

To offer insurance, no one needs to be called a broker—'consultant', 'agent', 'expert' or 'service' will do just as well. It's not even necessary to use a name that implies expertise in insurance: it's quite common for used-car dealers to offer 'immediate insurance', simply because they have an agency for an insurance company and can issue cover-notes within certain limitations of risk.

'All insurance companies need to increase their premium income,' admits BIBA's John Smeaton, 'and they aren't going to worry too much about who sells their policies if he produces income.'

Blatant fiddling...? 'It's a common complaint, though it doesn't always mean that the agent is a rogue'

JOHN SMEATON, BIBA

And why should they? If a sale is correctly handled, there's no problem; if it isn't, it's unlikely to reflect on the insurer, for, as in the McNealy case, he probably can repudiate the claim.

Smeaton feels that insurers should and could be lot more choosy. 'A lot of trouble would be avoided if agencies were held on a tighter rein,' he says. But the British Insurance Association claims that its members already do take care: 'They have a lot to lose if the motorist is badly covered,' says spokesman Ted Dewbury. 'Morally and financially, they are responsible for their agents.'

This, plainly, is not always the case. The Pennine didn't feel that it was 'morally' or 'financially' obliged to look after John McNealy's claim, and the courts agreed. And Pennine is not alone in despatching brokers' mistakes.

An insurance company may, for example, refuse to support a broker who had exceeded the limit of his authority. The BIA's Dewbury notes: 'Many agents have a limit of authority that restricts them to arranging, say, insurance for drivers aged over 25, of certain professions, or using vehicles up to Group 5 rating only. If they issued a cover-note outside this authority, the motorist would be illegally on cover.' And what price 'moral' obligations then?

Intermediaries' incompetence or inexperience probably accounts for many of the problems of motorists left with inadequate cover. But many brokers and agents are also guilty of leaving clients unprotected by a curious bit of self-interest. It works like this...

A broker, or whoever, fixes up a motorist with a policy at an agreed premium, generally for a year's cover, and is paid commission on the deal by

an insurance company—10–15% is the norm—which is repeated every year that the policy is renewed. When the policy is due to expire, a renewal invitation is sent to the motorist setting out the premium and no-claims discount situation. This will also contain a reminder to declare any material facts that may have changed during the past year.

If the motorist deals with his insurer direct, he will receive this document direct. If not, it will be sent via the intermediary, who may or may not pass it on to his client. Some simply write to the motorist, telling him the amount of the next year's premium.

This is bad practice that could lead to a motorist being unable to produce evidence of insurance, says the AA's Mike Saunders. 'But some brokers think that, armed with NCD proof, the client will dash round the corner and place his business elsewhere... BIBA should insist that its members always issue the official renewal notice.'

BIBA claims that its members do this. 'The insurance industry has given an undertaking to government,' says John Smeaton. 'Brokers are bound to ask the insured to re-declare on renewal.' But, in many instances, this patently doesn't happen.

It's a situation that the BIA doesn't like, and it also points out that possession of a renewal notice gives proof of Road

continued on page 55

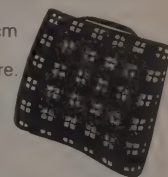
POSTURE CURVE

The majority of Britain's population have suffered severe discomfort and pain from backache at one time or another. This disturbing fact has become an increasingly widespread problem today.

Poor car seating and long periods of sitting with incorrect posture leads to strain on the spine, its associated muscles and ligaments. This can lead to discomfort, fatigue and often lack of concentration which when driving could lead to an accident.

Posture Curve, a light and portable support cushion for the lumbar back, goes a long way to eliminating the problem of backache. Designed by an internationally famous back specialist and approved by the medical profession, Posture Curve enables you to adopt the ideal sitting position almost anywhere. This patented, scientifically shaped lumbar support cushion ensures that the *natural* curve of the spine is maintained at all times. Less stress, less strain, so reduced backache. Even chronic sufferers can benefit enormously by gaining the comfort that no ordinary seat can give.

This superb quality product comprises a precisely moulded polyether foam, British Patent 1294091, fitted with a loose washable cover of natural fibres in black, chocolate brown, bottle green or Black Watch Tartan. It is easy to carry, measuring 36 cm x 31 cm x 8 cm max., and weighing only 350 grammes you can use it anywhere. Posture Curve is excellent value for money, costing only £7.95 each including V.A.T. (8%) + 45p P & P



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Posture Curve—the correct way to sit naturally
Available through Boots

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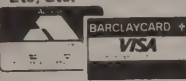
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TRANSOUND

Say YES to the Electrolux 'Camping Box'

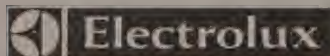


RC 160
Camping Box

**Portable, top-opening fridge
for campers.**

- * 3-way operation: 220-240V mains, 12V car battery or bottled gas.
- * No motor - virtually silent and vibration free.
- * 1.25 cu.ft. gross (1.2 net).
- * H. 17 1/8" W. 19 1/8" D. 16 1/2"

Not suitable for bottled gas operation in confined spaces



Electrolux Ltd., Leisure Products Division, Luton LU4 9QQ.

'Lovely little motor, sweet as a nut. a snip at £1350. First run out, down to jumped out with

THE TIME may not be far off when anyone intending to drive for a living will be asked by an employer to undergo more than a straightforward medical: he could also be put in front of an ultrasonic scanner that will assess whether the job might make him a backache victim.

It's not just fanciful thinking. A prototype machine is built and in use. And, with back disorders accounting for 13 1/2 million working-days lost last year—strikes and disputes lost a 'mere' 9 1/2 million—it is clearly an attractive proposition to firms hard-pressed by absenteeism.

Doctors estimate that there are 5 1/2 million people in Britain who were born to back pain, quite apart from those unfortunates who simply 'put their backs out'.

The potential sufferer has a medically identifiable condition known as a narrow spinal canal—if you imagine the vertebrae as a too-tight sleeve, and the nerves as the arm inside it, you have some idea of the problem. This can produce severe pain, even disability, when subjected to pressure from, say, lifting weights... or sitting for long spells in ill-designed or worn car seats.

'Driving, as well as heavy labouring, can trigger back problems,' confirms Richard Porter, orthopaedic consultant at Doncaster Royal Infirmary, S Yorks, the man behind the world's first back-pain scanner. And Duncan Troup, senior research fellow at Liverpool University's orthopaedic surgery department, goes further: the man who spends more than half his working day in the driving seat is three times more likely to suffer with his back than the average worker.

The villain at the centre of the piece is what the driver sits on. Car seats, says

Replacing a worn driver's seat is, at first sight, expensive. A brand-new unit costs around £60, and at least half this for a reconditioned model... if you can lay your hands on one.

The most obvious answer—and the cheapest—is frequently overlooked, says Dr Watkin: to simply replace the deformed foam in the cushion and squab, and insert a piece of plywood over the existing suspension.

Chances are that you'll end up with a seat that is orthopaedically better than the new original—especially if you invest in a tougher foam than the manufacturer fitted.

Troup, don't stop postural, vibratory and muscular stress and road shock.

Many motorists would go along with that. DRIVE questioned 100 at random, and found that more than a quarter complained of back trouble—and a third of these were quite sure that driving either caused or affected it.

Says Troup: 'The most important single factor in preventing back symptoms in

drivers is the design of the seat.' Yet, according to London orthopaedic specialist Dr Bernard Watkin, an expert on car-seat design, not enough has been done by vehicle manufacturers to provide adequate lumbar support and cushion shape.

That's only what he thinks of cars fresh off the assembly-line; in the secondhand market, he believes the situation to be a great deal worse, for car seats are too often built to last even less well than the cars around them. In general, the comfort of the car is of a level that few drivers would tolerate in their armchairs at home.

True, a car seat is used for a different purpose than an armchair; and, granted, we spend more time sitting at home (60 hours a week, according to the latest BBC research on sedentary pastimes) than in cars. But we do have a clear choice when shopping around for furnishings; and, as the Furniture Industry Research Association points out, although most people hold on to a lounge suite for more than 10 years and will put up with worn upholstery, they will usually get rid of it before it becomes really uncomfortable.

Unhappily, as the table opposite shows, the average British-car seat simply doesn't compare, either for comfort or for durability: of 12 popular models reviewed, only the Vauxhall Cavalier earn praise from our experts—Dr Watkin, who analysed the seats in new cars, and Dr John Teall, medical officer on the London-Mexico and London-Sydney car rallies, who assessed two- and three-year-old secondhand counterparts.

The conclusion of Dr Teall: 'Apart from the Cavalier, I have never sat in so many uncomfortable seats.' Said Dr Watkin: 'The well-designed seat should provide the shape and firmness to support the body correctly throughout the required range of postures. For example, it should combine lumbar support and thigh support without inhibiting circulation; and a head restraint to minimise whiplash is essential.'

'There is, as yet, no seat that satisfactorily fulfils all the specified requirements. Even the three best that I have seen—those in the Range Rover, Triumph Stag and the Alfa Romeo 1750GTV and 2000GTV—are far from ideal.'

Across all makes, British and foreign, it is generally the case that you get what you pay for. In upmarket cars, cushions and squabs tend to deteriorate uniformly, thus lessening the discomfort.

CAN ANYTHING be done to improve the support in new-car seats, and counter deformation in used cars? DRIVE tried six back aids, available either from accessory

Only two previous owners, 28,000 miles—
Clacton in under two hours. Incredible! Parked near the pier,
the kids, the dog, Gran and the beachball and...

Aaaaargh !!!!'



shops or through mail-order. Dr Teall's comment after trying each device, first in a brand-new and then a three-year-old Ford Escort Popular:

'None would help to overcome the effects of deterioration. And only two would do the job they're supposed to for new-car seats.' These were the Sit-rite (KL Automotive Products) and the Posture Curve (F Ashton Ltd).

Of the others, the Sit-Easi (Pressure Sealed Plastics) and Sitkit (Lacy-Hulbert Company) provided some lumbar benefit at the expense of lateral support, while the Autolux (Autolux Accessories) and LumBak (Lumbak and Co) prevented

side-to-side motion only. Indeed, the LumBak tended to restrict arm movement . . . and the Autolux, said Dr Teall, could make a bad seat worse.

The only real solution is a better design of car seat, and the AA, jointly with the Backpain Association, has sponsored preliminary research aimed at just this—a design for a practicable and comfortable driving seat 'that can be used safely for long periods'.

'Safely' because, according to the Transport and Road Research Laboratory, pain isn't the only spin-off from a bad car seat: in a study of road accidents in which drivers were at fault, it found that *fatigue*

accounted for one in four. 'And it can be assumed,' says a TRRL spokesman, 'that driver discomfort was a factor.'

Dr Watkin, too, has been working closely with Imperial Chemical Industries to produce a revolutionary polypropylene seat, with adjustable and removable upholstery panels, that meets the shortcomings. ICI has already developed a prototype which, it claims, would be no more expensive in mass production than the 'backbreakers' fitted to so many of today's cars. Not only that, but it would last the life of the vehicle.

And a comfortable, long-life seat may prolong *your* life, too. ROY JOHNSTONE

ARE YOU SITTING COMFORTABLY?

DRIVE asked Dr Bernard Watkin to seat-test a selection of new British cars and grade them according to our colour code:

● bad—could be orthopaedically harmful ● very poor—designed without orthopaedic considerations ● poor—again, no orthopaedic design ● fair—but still no orthopaedic design ● moderate—but inadequate support at certain points

Chrysler Avenger	Triumph Dolomite 1300	Austin-Morris Princess, Morris Marina, Ford Cortina Mk4, Ford Capri, Vauxhall Viva	Austin Allegro, Chrysler Hunter	Chrysler Alpine	Ford Escort Popular	Vauxhall Cavalier
Severe deformation in centre of cushion, causing ache in bony prominences of pelvis and strain on lower back	Severe deformation at back of cushion, placing strain on calves and thighs, and putting squab lumbar support in wrong position	Severe deformation at back of cushion as before, plus deformation in squab, causing lack of support to upper back	Severe deformation in centre of cushion, causing ache in bony prominences of pelvis and strain on lower back	Severe deformation at back of cushion, as Triumph Dolomite and Co	Some cushion deformation, but still retaining original characteristics	

Then we asked Dr Teall for his verdict on how those same seats were standing— or sitting up, in secondhand models, after 2–3 years' driving

CAR TESTS

How good, so long after the event, is 1970's Car of the Year? Has yesterday's 'trendy' grown up to be an ageing bore?

Citroen GS Club estate

Price £3657 On the road £3783

In a time when accountants have as much influence as engineers on car development, Citroen continues to go its own idiosyncratic way. It's a brave policy that has set trends for others to follow—front-wheel drive was once a Citroen peculiarity, today it's *de rigueur* for leading makers.

The GS range was years ahead of its time when launched in 1970, but the cars' exciting specification was spoiled by poor attention to detail. Trendsetters can be terrible to live with, and the first test cars deserved our complaints about poor starting and gear changing, a fretful ride and flimsy trim.

Nine years of development have passed, and, in the interim, the Peugeot company has moved into Citroen's life with a harder-headed approach to profits. Today's GS may look the same, but beneath its timeless styling the precocious upstart has matured...

How it goes

There's only one version of Citroen's air-cooled, flat-four engine for the GS Club estate—a 1220cc unit that may soon be joined on this side of the Channel by a new 1300cc version. A product of the French car maker's struggle with a tax system that penalises cc's, its 59bhp doesn't go far in a body weighing 18½cwt, even one as streamlined as the GS, and drivers need to exploit gears and engine revs to spur the car into action. Yet so smooth and uncompaining is progress to the tachometer's red-lined 6500rpm that the necessity becomes a pleasure.

Earlier GS models proved temperamental in morning dashes to the station and school gates, but former starting and carburettor maladies seem to have been cured—an achievement that's marred only by a rough engine-note at low revs, and the ticking and 'rustling' of the air-cooled engine.

Through-the-gears acceleration is certainly nothing to get excited about when compared to the rivals in our table. It's the wind-cheating body shape that assists the notably good top speed of 90mph, for, in theory, the car is under-geared in fourth; but calm, 70mph cruising, free of wind noise and body resonance, proves that Citroen's sums are correct. In top gear alone, the GS pulls grudgingly from below 30mph, but still manages better stopwatch times than Chrysler's Horizon.

Though vastly improved, the gear change still suffers from a springy obstructiveness in the two lower ratios. It's a long sweep

across the gate, too, but third and top are easily located.

Not surprisingly, fuel economy fails to match that of the higher-g geared Horizon and other, newer rivals. In all consumption tests except our steady 30mph run, the GS proved thirstier than the Horizon.

The estate-car profile isn't wholly to blame: mediocre fuel economy is a failing of all GS models that, hopefully, the new 1300cc engine will rectify. But our test car's oil consumption of 750 miles per pint was particularly disappointing and puzzling—many a GS clocks up more than 1000 miles per pint.

Some rivals may surpass its tenacious cornering with less complex engineering; others might equal its comfortable ride; but still we marvel at Citroen's ability to build both virtues into one car. The GS's traction and grip over the most treacherous of road surfaces sets it apart—and it does it all on conventional, skinny Michelin ZX radial-ply tyres. On the motorway, its flat, unswerving progress is hugely reassuring, and on minor roads the precise steering demands little correction.

Potholes and impetuous driving are smoothed over by the GS's unflurried ride: passengers, especially, appreciate the self-levelling hydraulics of the suspension set-up, which can be set to produce a soft ride that never degenerates into alarming roll or

HOW GOOD

At-a-glance

DRIVE's verdict on the Citroen GS Club estate, taking into consideration its rivals, its price and what kind of car it's *meant* to be

Out of five

PERFORMANCE

●●●●

FUEL ECONOMY

●●

HANDLING/STEERING

●●●●●●

COMFORT/REFINEMENT

●●●●●●

INTERIOR SPACE

●●●●●

PASSENGER AIDS

●●●●

DRIVER AIDS

●●●●

ACCIDENT/INJURY SAFEGUARDS

●●●●

EASE OF REPAIR/RELIABILITY

●●

wallow, even when the car is laden. Over all manner of road surfaces, the GS maintains an almost uncanny composure—a virtue dramatically proved by one dealer we knew who regularly included in his demonstration runs a speedy but unruffled sprint across a field! Only a sudden dip or hump can upset the Citroen's *sang-froid*.

GS brakes are... let's say, an acquired taste. To the uninitiated, they lack even progression in both pedal movement and effort, and the bonnet's refusal to 'dive' under heavy braking adds to the driver's confusion, making it unnecessarily hard to assess and apply the right degree of stopping power. Fade in hard use is no problem, but an unwelcome vibration can occur during normal braking.

The handbrake—a cumbersome pull-out spade handle on the fascia—tends to drag the driver out of his seat, and it features a release trigger that's unhelpfully unconverted left-to-right for the UK.

Inside story

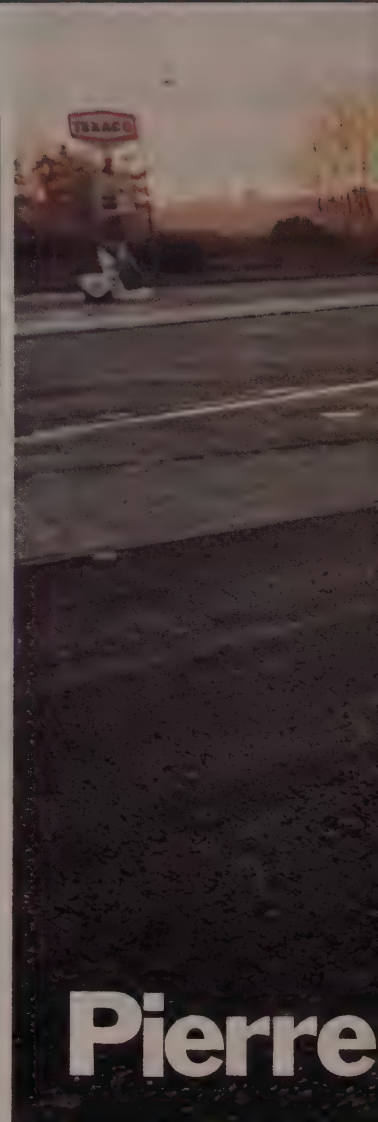
Unlocking the various doors is an art in itself: two keys are involved, and neither front door can be locked from inside. Controls are laid out with a logic that's foreign to our testers, and their operation can be bemusing: trafficators are not self-cancelling, and headlamp flash and dip stalks work the opposite way to everyone else's, making life confusing for the two-car family that doesn't stay loyal to the Citroen model range.

Small, pleasingly plain instrument dials prove difficult to read at night; but an adjacent row of push-push switches are illuminated by the fascia's lighting. A telltale lamp for the choke is provided, but none to warn of low fuel level.

Pedals are well adapted to right-hand drive, particularly the short, precise clutch that matches the feel of the footbrake. The accelerator, however, has a long, swinging action that could make the timid feel that the GS is more under-powered than it actually is.

GS seats have assumed a welcome firmness since we first (back in 1976) rudely declared that they offered as much support as a tired mattress. Backrest shaping is particularly good, but shorter drivers will still have to resort to a shallow cushion to gain enough height and may find that both gear shift and steering wheel are a stretch away.

In the back and front, tall occupants will compliment the estate on its headroom which, like its legroom, usefully betters that in the GS saloon. While some inches have been borrowed for the back-seat passengers' legroom, there's also enough stretching room in the front to satisfy all but the very



Pierre

CITROEN GS CLUB ESTATE

Front engine: 1222cc/4cyl, 2 OHC (2 belts); one twin-venturi carb; 59bhp at 5750rpm
Front drive: 4 gears; 15.5mph/1000rpm
Suspension: front—ind wishbones, hydro-pneumatic spheres, anti-roll bar; rear—ind trailing arms, spheres interconnected with front and self-levelling, anti-roll bar
Steering: rack and pinion, 3½ turns/31ft circle; 4½J wheels, 145SR 15 radials
Brakes: pressurized hydraulic discs all round

Parts/repairs (inc VAT)

clutch £36.61 (fitting 7.5hr)
exhaust £40.20 (2.5hr)
headlamp unit (no bulb) £34.47 (0.7hr)
front bumper (3 part) £51.41 (0.8hr)
laminated windscreen £53.46 (1.9hr)

oil filter and points £4.75 (1.6hr)
major service 10,000 miles (5hr)

	per year	per mile
Running costs	£650	5.42p
Loss of value	£253	2.11p
Total depreciation	£846	7.05p
Insurance group	3/4	

THE RIVALS CLOCK IN

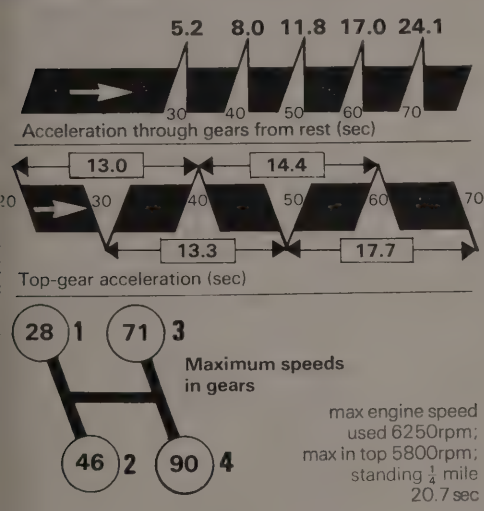
Chrysler Horizon GL
Austin Allegro 1300S
VW Golf L1100
Peugeot 305GL
Mazda 323 1300



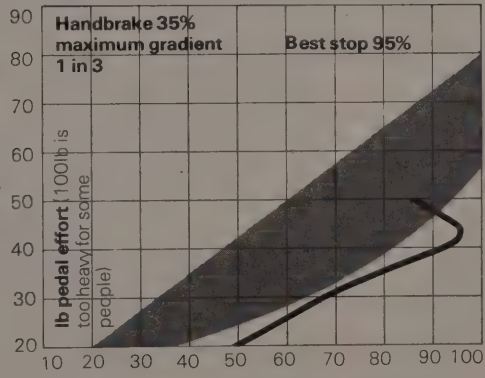
Pan

John Perkins

PERFORMANCE



BRAKES—pedal pressures and responses



% efficiency (ideal car's braking performance falls within central zone—above, too heavy, below, too light)
Fade test pedal pressure needed for 75% stop (ideal car would show no variation)
30lb at start; **35lb** in constant use; **37lb** in severe use
Watersplash 43lb at first, **3** stops to recover

FUEL 4-star/97 octane min overall consumption 31 $\frac{1}{2}$ mpg effective tank range 270 miles/8 $\frac{1}{2}$ gal

Normal range of consumption

short journey, suburban	26mpg
hard driving, heavy traffic	27mpg
motorway—70mph cruising	29mpg
mixed roads—brisk, 50mph cruising	33mpg
quiet rural—40mph cruising	38mpg

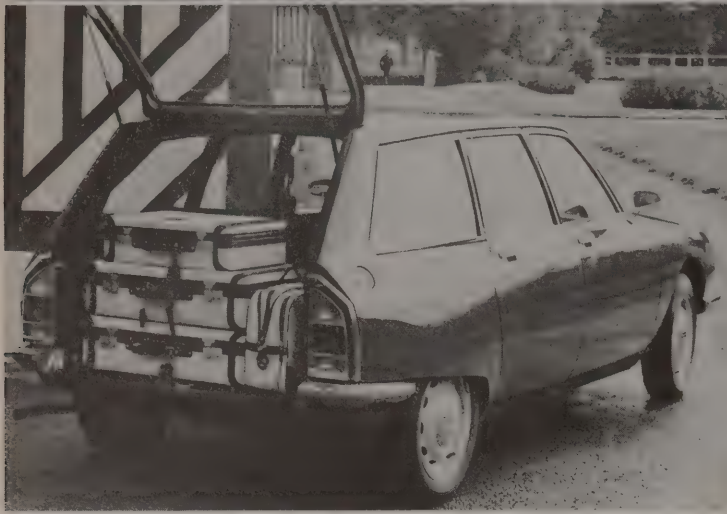
Consumption at steady speeds

30mph	54mpg
56mph	37 $\frac{1}{2}$ mpg
70mph	29mpg
max mph	19 $\frac{1}{2}$ mpg

SAFETY CHECKS O = factory fitted option

steering: energy absorbing?	Yes	hazard warning: fitted?	Yes
front seats: secure mounts?	Yes	interior well padded?	No
head restraint?	O	w/screen: laminated?	No
front belts: effective?	Yes	doors: crashproof?	Yes
convenient?	Yes	childproof?	Yes
rear belts: fitted?	No	petrol: spillproof?	Yes
		brakes failsafe?	Yes
		load sensitive?	Yes

ON-ROAD PRICE (£)	CAPACITY (CC)	FUEL OVERALL (MPG)	MAXIMUM SPEED (MPH)	0-60MPH (SEC)	30-50MPH IN TOP (SEC)	BEST STOP (% g/lb)	OVERALL LENGTH (FT/IN)	MAXIMUM LEGROOM FRONT (IN)	TYPICAL LEGROOM REAR (IN)	STEERING TURNS/CIRCLE (FT)
3313	1118	35 $\frac{1}{2}$	88	18.4	15.2	97/55	13' 0"	41	37	4 $\frac{1}{2}$ /33 $\frac{1}{2}$
3033	1275	37	85	19.0	12.9	90/55	12' 8"	40	40 $\frac{1}{2}$	3 $\frac{1}{2}$ /34
3520	1096	35 $\frac{1}{2}$	87	16.8	11.5	87/70	12' 6 $\frac{1}{2}$ "	39 $\frac{1}{2}$	38 $\frac{1}{2}$	3 $\frac{1}{2}$ /32 $\frac{1}{2}$
3495	1290	33 $\frac{3}{4}$	88	15.8	13.1	88/38	13' 10 $\frac{3}{4}$ "	41 $\frac{1}{2}$	38 $\frac{1}{2}$	3 $\frac{1}{2}$ /32 $\frac{1}{2}$
3059	1272	36 $\frac{1}{2}$	89	15.9	11.8	100/40	13' 0"	39 $\frac{1}{2}$	37 $\frac{1}{2}$	4 $\frac{1}{2}$ /29 $\frac{1}{2}$



long-limbed driver and his mate.

This is one estate-car conversion that loses nothing in passenger comfort while offering an unusually rectangular cargo space. Loading avoids all the awkward stooping demanded by the Club saloon's fixed rear window, and back sufferers will appreciate the ultra-low load-platform height that's achieved by a combination of the rear bumper rising with the tailgate and the suspension settling when the engine's switched off—a feature that also takes some of the strain out of caravan hitching. The disadvantage is that opening the rear door involves grabbing a handful of dirty bumper.

Even though it doesn't have a volcanic output, the heater keeps everyone's toes warm, and the ventilation is defeated only by hot weather and slow traffic. But the estate's heated rear screen has a wash-wipe system that infuriated our testers by working only when a finger is held on the button.

There are blind spots left by the front wipers. The headlamps, however, are superb, even when dipped, and the constant ride-height makes beam-trimming for different loads unnecessary.

On the safety front, moulded rubber around the sunvisors and mirror stems seems pointless when the roof aerial's bolt lurks dangerously under the headlining; but the inertia-reel seatbelts

are both safe and convenient—provided you remember to thread the webbing between the seat and its rake-adjustment lever to avoid the risk of slackness. Head restraints can be fitted in the holes provided in the front seats, but neither laminated screen nor rear seatbelts are listed as options.

Living together

Reading the handbook's explanation of the car's intricacies tends to confirm the wisdom of leaving GS maintenance well alone. There's little practical instruction, and the home mechanic would be ill-advised to start work without specialised knowledge and equipment.

Such mechanical complexity, allied to earlier models' reputation for niggling faults and costly spares, depresses resale values. Parts prices seem better now, but the GS still has a poor depreciation record even compared with other imports. It's worth shopping around for insurance quotes—some companies rate it a group lower than others.

Apart from its party-trick appeal, the manual ride-height adjustment really helps through flood water or over rough ground. It also makes wheel changing delightfully easy: pumping the body up to its highest level before positioning the jack results, on switching off the engine, in the dead wheel raising itself up for

replacement. The spare is cradled at the back of the engine compartment, which makes its removal heavy work, but does avoid luggage being disturbed. A starting handle and winter radiator muff are other thoughtful touches.

Construction standards are distinctly improved on the latest GS. Paintwork seems better, and apart from side-window sill trims that etch the paint, there are few rust-promoting points on the rest of the coachwork. The chrome on door handles is of poor quality but the bumpers are stainless steel—as are the 'old fashioned' hub-caps that drew praise from those who had to wash the car.

Citroens destined for Britain get an extra layer of Tectyl wax over the sills and the smooth underbody's pvc coating. Together, they produce a formidable barrier to rust that's reinforced by a conscientious injection of wax into box sections. We could fault only the standard of the chip-proof pvc's application within the wheelarches, and the fact that the wax was already succumbing to stone bombardment.

Verdict

Can a nine-year-old hope to match the qualities of more-recently conceived rivals? When it's a Citroen, the answer is most definitely yes.

Made by the same corporate group as the Chrysler Horizon and the Peugeot 305, this Car of the Year 1970 is in several ways as trendsetting today as then: its svelte styling houses a suspension system that is still outstanding among family cars.

Perhaps the modest engine is less impressive by current standards of performance and economy, but there's nothing amiss that the forthcoming 1300cc's extra power cannot cure.

Servicing may pose a problem for many owners, but the Club's cossetting should help offset the pain of garage bills and, in estate-car form, it could well earn its keep.

Like individualists the world over, Citroen's GS Club will continue to generate reactions ranging from deep mistrust to fierce loyalty. Let's call it a family car for the non-conformist.



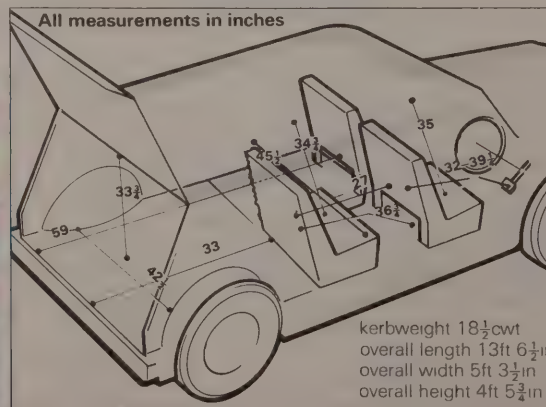
While our panel of amateur car consultants could see the appeal of the rival Chrysler Horizon— all had to agree that Citroen's GS Club is in a class of its own...

'I liked it as soon as I got in,' said Denise Bewsy. 'The up-and-down suspension is great fun, the seats are the best I've ever tried, and the one-spoke steering wheel suits my style of driving. The instrument layout isn't gimmicky, and the radio's position between the front seats is considerate—everyone in the car can reach it. I also like the idea of having the handbrake on the fascia, but, when Citroen switched to right-hand-drive, it should have moved the release button—I had to remember to turn my hand palm-upwards to operate it. In general, though, the whole car is nicely finished—unlike the Horizon.'

'That's right,' said Andrew Perry —'the Club's so much more sophisticated than the Horizon. The gear shift's pattern was too tight for me—I went into top when I wanted second—but I loved the whole car's aura of comfort. I'd definitely consider a GS Club estate for my business if I couldn't have a bigger car. Denise said it was hard to park, but I thought the good steering lock made it very manoeuvrable, though rearward vision isn't helped by the thick rear pillars and the posts between the doors.'

Fred Pocock liked the Citroen, too, barring some reservations: 'It is nippy in all gears except top, so I occasionally felt the need to change down to third. In most other cars you have to lift, press, or yank the gear shift to get into reverse, but the Citroen has nothing to stop you engaging reverse by mistake. Certainly the Club's very comfortable. I liked the seat material—it seemed to wrap around me—and both roadholding and ride are beautiful. But I still wouldn't buy one—it's too small.'

Staff writer and tester Bob Oxford wondered if the Everyman team would think Citroen's complex suspension 'fun' when it came to paying for repairs to it... But his advice to GS Club fanciers is: 'Don't worry about engaging reverse by mistake—I suspect that Fred doesn't know his own strength.'



Supertrol 001 fights rust where you can't see.

The trouble with rust is that it does most of its damage out of sight. And by the time it's visible the rot's well and truly set in.

So how do you fight rust you can't even see, let alone reach?

Simple—with Supertrol 001, the spray-on corrosion fighter from CADULAC. Use it as a deterrent, to protect your car before rust sets in. Or use it to fight rust that's already there. Either way, Supertrol 001 gets down to rust in a way that you never could.

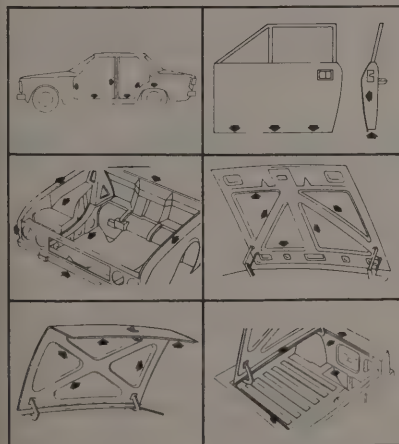
JUST POINT AND SPRAY

No tiresome preparation or mixing. Just spray Supertrol 001 into the concealed danger zones: behind the bumper, under the wings, inside the doors, sills and box sections, and all those other hidden areas so vulnerable to rust attack, and so dangerous—and expensive to repair—

if left unprotected.

A simple application of Supertrol 001:

- ☐ Penetrates those hidden cavities.
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- ☐ Protects anything metal from corrosion: not just cars but bicycles, agricultural machinery, gardening and hand tools, boats and heavy machinery too.

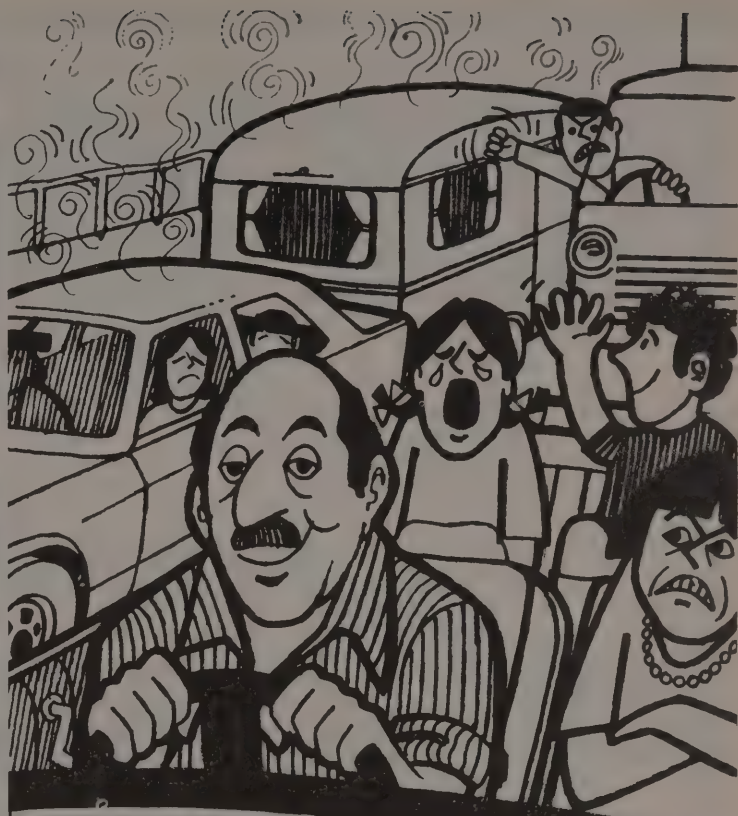


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How to keep your cool in the hot seat

You know the feeling, we're sure.

The road's blocked, you're following a lorry, and the guy behind keeps hooting. The sun blazes down. The kids start crying.

And then the temperature needle moves into the red area.

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A new Waxstat radiator thermostat helps your car's engine keep its cool. Easily fitted in minutes without special tools, it could make all the difference between an enjoyable ride or a nightmare trip!

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Western Thomson Controls Ltd.
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Chard
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A MUST FOR YOUR TOURING KIT

CAR TESTS

For van space plus saloon comfort, hatchbacks seem an ideal compromise. We test the descendant of a pioneer . . .

Chrysler Horizon GL 1118cc

Price £3188 On the road £3313

The Horizon is Chrysler's newest entry in the crowded hatchback market—slightly bigger than its Sunbeam stablemate and boasting five doors. But what's so special about the French-made Horizon that a panel of 53 European automobile experts should vote it Car of the Year 1979? After all, it wears some of the British-made Sunbeam's exterior styling—and that car finished 15th in the panel's voting. Under its skin, too, the Horizon's engineering is as pure Simca as the 1100 model that, more than a decade ago, shared the five-door holdall market with Renault's 16.

Are the Simca's works so sweet that hatchback fanciers will fall in love with them a second time around—or could it be there are wrinkles in the facelift?

How it goes

There's a choice of 1118cc or 1294cc engines for the Horizon, as there was for the Simca 1100, and, like all current Chryslers, contactless electronic ignition is standard. Otherwise, the smaller engine fitted to our test car seemed little changed—a mixed blessing for, although it's a willing little motor, capable of buzzing well beyond our self-imposed 6300rpm limit, it's not as sewing-machine-smooth as some newer overhead-cam units. When asked to pull in top from below 30mph, the engine feels lumpy and troubled. To compensate, Chrysler has insulated passengers so successfully that, when 70mph is reached, it sounds quiet and relaxed.

For a new design, the Horizon is surprisingly heavy, which partly explains the 1118cc's disappointing acceleration—inferior to the last Simca 1100 that we tested. Through the gears, it is faster to 40mph than its French rival Citroen GS Club, but by 70mph the elderly engine and squelchy, poor-quality four-speed gear change conspire to lose almost 4sec to the slicker car. The Horizon's high gearing (for fuel economy) pays an even heavier penalty in top-gear surges, for it consistently lags behind the Citroen, up to a respectable maximum of 88mph.

Fuel consumption is no better than average by current new-car standards, but longer cross-country runs can yield around 40mpg if cruising speeds are restrained. Tank range is good, too, and it's an easy car to fill—and to empty illicitly: no locking cap is provided.

The Horizon's name may be

Franglais, but its ride and handling are distinctly French. Softer and more absorbent than Chrysler's Sunbeam or Avenger, the suspension's rough-road progress is impressive—barring body thumps and clonks that can be heard if not felt. Like many of its countrymen, the car also tilts noticeably when hurried around corners, but good front-seat shaping and low-geared, easy steering take the exertion out of brisk driving. In general, we rate the Horizon as quite the nicest current Chrysler for motorists who like precise handling allied to an especially comfortable ride.

Two warning lights advise of low brake-fluid level and worn front pads, as well as line-pressure failure or handbrake on. The latter is especially useful, as it's often hard to tell if the lever is off. The brakes suffered some fade in our arduous track tests—disappointing compared to the Sunbeam that we tested last year—but the handbrake held well on a 1-in-3 hill.

Inside story

Our Horizon GL's road behaviour was superior to its standard of decor. The uninspired middle-of-the-range trim featured three different shades of grey, and the new instrument cluster looked cheap and cheerful against the standard pack fitted on all other Chryslers. It's mean, too, to omit the voltmeter and oil-pressure

HOW GOOD

At-a-glance

DRIVE's verdict on the Chrysler Horizon GL, taking into consideration its rivals, its price and what kind of car it's *meant* to be

Out of five

PERFORMANCE

●●

FUEL ECONOMY

●●●●

HANDLING/STEERING

●●●●

COMFORT/REFINEMENT

●●●●●

INTERIOR SPACE

●●●●●

PASSENGER AIDS

●●

DRIVER AIDS

●●

ACCIDENT/INJURY SAFEGUARDS

●●●●

EASE OF REPAIR/RELIABILITY

●●●●●

gauges on the GL: other Chrysler GLs are equipped with them.

Testers complained of warning lamps rendered invisible by daylight and clusters of minor switches that were indistinguishable at night. The standard Chrysler three-stalk layout, originated for the Simca, is retained, and it works well—once you are used to the long, willowy stalks. The linking of front and rear wash-wipe functions in one switch was an irritation, for who wants to have rear vision blurred when they wish only to wash the front screen?

Long-legged drivers may bruise their knees on the low, fixed steering column—a feature that suits short drivers admirably. And while front seats feel initially squashy, longer acquaintance reveals a sensible degree of underlying support.

Prominent rear-door sills could hamper elderly passengers, and the rear seat proves disappointing, with too short a cushion and a backrest so upright that one perches on it rather than sinks into it. Leg- and headroom is only moderate, offering a minimal gain over Chrysler's shorter Sunbeam.

It's as a load carrier that the Horizon excels: its rear cushion sinks as the backrest is tilted forward over it, all in one easy movement that forms a 55in-long load platform. Even with the four seats in place, luggage space is superior to the Sunbeam's and—unlike most of its hatchback rivals—you can carry the folded luggage canopy with you without it being a nuisance. There is the inconvenience of a high load sill, however, and the GL has no tailgate illumination. Battening down the hatch needs only a nudge, and it can be opened without a key.

In winter, the heating and demisting booster fan needs to be used almost continuously—no hardship as it's quiet on its two slower speeds. A warm breeze is directed down the middle of the car to keep rear passengers warm—it was strong enough to melt the chocolate that one of our testers left on the centre console tray! Cold-air ventilation is generous, too, with a strong draught to the floor that might be welcome in a freak British summer.

'See and be seen' safety measures are taken seriously. In addition to heating, washing and wiping for the rear screen, two powerful fog-lamps are built-in as standard and all-round vision is excellent, thanks to generous glass areas. Halogen headlamps operate on dipped as well as main beam; an unusual bonus that reduces headlamp range without cutting intensity; they are easily trimmed to prevent dazzle, too.

Front-seat head restraints, rear seatbelts and a laminated wind-



Works

CHRYSLER HORIZON GL 1118cc

Front engine: 1118cc/4cyl. OHV (chain); one single-venturi carb; 58bhp at 5600rpm
Front drive: 4 gears; 16.05mph/1000rpm
Suspension: front—ind wishbones, torsion bars, anti-roll bar; rear—ind trailing arms, coil springs, anti-roll bar
Steering: rack and pinion, 4½ turns/33½ft circle; 4½J wheels, 145 SR 13 radials
Brakes: servoed discs front/drums rear

Parts/repairs (inc VAT)
clutch £37.43 (fitting n/a)
exhaust £43.20 (n/a)
headlamp unit £16.20 (n/a)
front bumper (3 parts) £25.92 (n/a)
laminated windscreen £40 (n/a)

oil filter (no points) £2.92 (n/a)
major service 10,000 miles (av. 2.7hr)

	per year	per mile
Running costs	£508	4.73p
Loss of value	£264	2.20p
Total depreciation	£718	5.98p
Insurance group	3,	

THE RIVALS CLOCK IN

Mazda 323 1300

Renault 14TL

Austin Allegro 1300S

VW Golf L1100

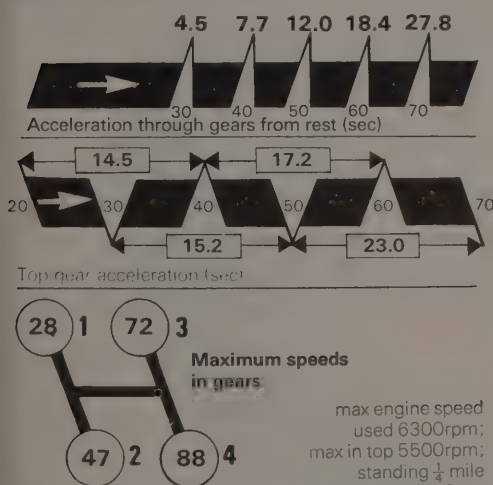
Peugeot 305GL



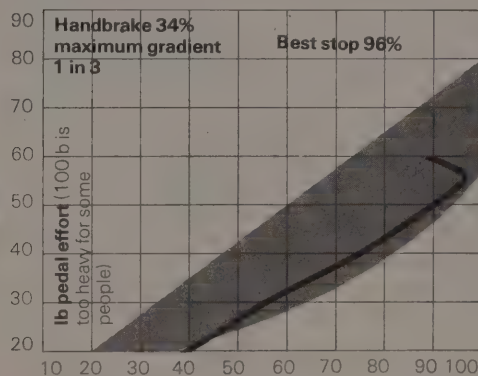
manager

John Perkins

PERFORMANCE



BRAKES—pedal pressures and responses



% efficiency (ideal car's braking performance falls within central zone—above, too heavy, below, too light)

Fade test pedal pressure needed for 75% stop (ideal car would show no variation)

35lb at start, **46lb** in constant use, **65lb** in severe use
Watersplash not measured (frozen)

FUEL 4-star/98 octane min overall consumption 35½ mpg effective tank range 320 miles/9gal

Normal range of consumption

hard driving, heavy traffic	28½ mpg
short journey, suburban	28½ mpg
motorway—70mph cruising	31½ mpg
mixed roads—brisk, 50mph cruising	36 mpg
quiet rural—40mph cruising	41 mpg

Consumption at steady speeds

30mph	52½ mpg
56mph	37½ mpg
70mph	31½ mpg
max mph	24½ mpg

SAFETY CHECKS O = factory fitted option

steering: energy absorbing?	Yes	hazard warning fitted?	Yes
front seats: secure mounts?	Yes	interior: well padded?	Yes
head restraint?	O	windscreen: laminated?	O
front belts: effective?	No	doors: crashproof?	Yes
convenient?	Yes	childproof?	Yes
rear belts: fitted?	O	petrol: spillproof?	Yes
		brakes: failsafe?	Yes
		load sensitive?	No

ON-ROAD PRICE (£)	CAPACITY (CC)	FUEL OVERALL (MPG)	MAXIMUM SPEED (MPH)	0-60MPH (SEC)	30-50MPH IN TOP (SEC)	BEST STOP (% g/lb)	OVERALL LENGTH (FT/IN)	MAXIMUM LEGROOM FRONT (IN)	TYPICAL LEGROOM REAR (IN)	STEERING TURNS/ CIRCLE (FT)
3059	1272	36½	89	15.9	11.8	100/40	13' 0"	39½	37½	4¼/29½
3163	1218	36½	89	14.8	11.3	90/70	13' 2"	41	38	4/32½
3033	1275	37	85	19.0	12.9	90/55	12' 8"	40	40½	3¼/34
3520	1096	35½	87	16.8	11.5	87/70	12' 6½"	39½	38½	3¼/32½
3495	1290	33½	88	15.8	13.1	88/38	13' 10½"	41½	38½	3¼/32½



level telltale can be fooled if you park on a steep uphill slope: it will flash until you switch off and restart on the level. Some drivers prefer to disconnect this 'aid'.

Spare-wheel removal from the exposed cradle at the rear does not disturb luggage, and the jack, neatly stowed behind the boot sill, can be located into its lifting points without grovelling about on wet roads.

A warranty that extends to wear-and-tear items in the first year, and reasonable parts prices for what is, in effect, a French import, make our projected running costs for 2½ years of ownership extremely competitive compared to British-built cars with long-established reputations for economical running.

Our depreciation figures are based on the Simca 1100. The Horizon should do even better, as a result of Chrysler's integrated product line throughout Europe, which should popularise this 'foreigner' in Britain and so boost resale values. It may even encourage insurers to look less guardedly at the Horizon—Group 3 seems a bit high for a modest 1100ccs.

Verdict

Before Chrysler moved in, the old Rootes Group had a happy knack of making their family cars look more opulent than they really were. In GL trim, however, the Horizon's plastic looks . . . like plastic. Inside, too, it's generally unimaginative, compared even to Chrysler's own GL-trimmed Avenger.

Once out of the showroom, the Horizon redeems itself with pleasing road manners. It's no sports car, and—especially in 1118cc form—it copes with, rather than excels at, hard driving; but it does travel quietly and smoothly, and it does it all with a minimum of maintenance, too.

Its Simca ancestry pays off in the cargo hold, where the platform length is unmatched by any car in our rivals table. Only an improved back seat and more-precise gear change are needed to make the Horizon GL 1118cc the comfortable, uncomplaining workhorse that many budget buyers would find totally acceptable.



'Nice, but not as luxurious as the Citroen', said Denise Bewsy, summing-up the Everyman panel's majority verdict against the Horizon. 'It may not be basic, but it looks more of a utility vehicle. The Chrysler feels the more responsive of the two, but much of the interior put me off: the seats don't have enough support, the upholstery looks nasty, and I didn't think much of the paintwork and the poor fit of the doors. I didn't like the car's handling at first, either, but I was surprised to find that it felt very stable on the motorway.'

Andrew Perry was not wholly won-over by the Horizon, but ultimately he preferred it to the Citroen: 'It has better all-round vision, and I liked the internal control for the door mirror—it's a feature that should be on all cars. The rest was disappointing: instruments may be adequate but they won my Worst-Design award; front passenger legroom is virtually nonexistent because of the parcels shelf, while, in the back, either the seat is too high or the roof too low. Whichever it is, I was knocking my head when the car went over small bumps. I don't think the Chrysler is a bad car—it's just a bit basic. I couldn't even find anywhere to put my cigarettes.'

Fred Pocock agreed, placing the Chrysler a unanimous second in our two-horse race. 'The clutch pedal was my first problem: when I put my foot on it, I was prevented from pushing down fully by the steering column. But, when I did get the clutch to the floor, I found the quality of the gear shift was quite good—which helped as there isn't much "go" in the 1100cc engine. Tyre noise worried me, too, as did wind noise. About all I did like was the fabric seats: the cushions supported my legs well.'

Bob Oxford, who rode 'shotgun' with our panellists, sums up: 'The Horizon that our amateur drivers tested is considerably cheaper than the Citroen, and, for a little more money, they could have enjoyed a much higher standard of trim that might have forestalled their criticisms of the GL's utility look. But there's no getting away from the clutch-pedal problem that Fred spotted: it's a fault that should have been designed-out before the Horizon was put on the market.'

screen are available at extra cost on the GL; the roof is carefully padded (an often-neglected safety area); and the fuel tank is safely placed. But the backs of the front seats have spiteful hard edges that can do no good to unbelted rear passengers in an emergency stop; the front seatbelts—the convenient, inertia-reel type—can be worn too slack because their guide tubes and the seat-rake adjusters prevent them reeling-up fully.

Living together

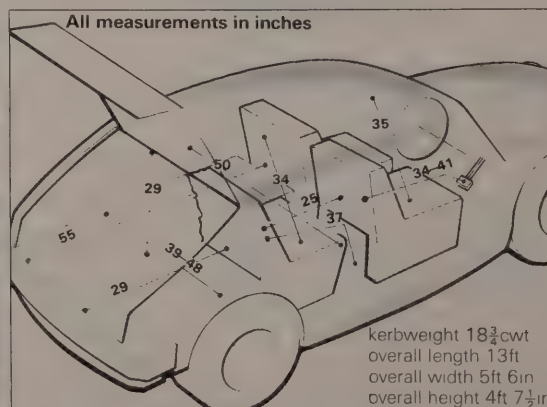
Chrysler claims improved primer-paint coverage for the Horizon, with a revised electro-plating technique. Without doubt, the extra pvc that's applied in production to the underbody and sills does provide good rust protection . . . where it's present: on our test car there were too many misses for long-term peace of mind. Door interiors are pvc-coated, too, but it's primer only

for box-section interiors, with no additional wax spray. The absence of water-harbours brightwork and the use of matt-black door handles and stainless steel bumpers help preserve exterior good looks and ease wash-day chores.

Like all 1979 Chryslers, the Horizon benefits from a semi-sealed cooling system, electric fan, diagnostic socket and telltales for engine oil level, brake-pad wear and low hydraulic fluid—all aimed at reducing servicing costs and time off the road. With their help, the 5000-mile check takes a mere 15 minutes.

Underbonnet access to routine service items is good; traditional timing marks are provided, even though the ignition system is electronic, and only the alternator is hard to get at.

According to the electronic dipstick, oil use was negligible in our 1000-mile test, though the oil-



Diesel - foolish things?



WITH MORE and more car manufacturers expected to offer diesel-engined options in their ranges—even Austin-Morris is tipped to throw its Marina in the diesel ring—it's on the cards that an increasing number of new-car buyers will be tempted to 'go derv'. (Derv, incidentally, stands for diesel-engined road vehicle.)

At first glance, the simplicity and economics of diesel are attractive: it's an inevitable by-product of crude-oil refining; derv engines don't have sparkplugs or ignition systems—the air in the combus-

tion chambers is compressed by the piston until it heats under pressure and injected diesel ignites spontaneously; and this high-compression helps Volkswagen's diesel Golf, for example, to an overall 17mpg bonus over its petrol-engined counterpart.

The bad news starts in the showroom, where the diesel buyer finds that his bill may come to some £700 more for the derv option. And his first stop at the fuel pumps will show that diesel costs about 10p more per gallon than 2-star petrol—a hangover from the days of the government Lib-Lab pact. The Liberals threatened to withdraw support for Labour's 1978 Budget over proposed petrol-tax increases; the government bowed to their demands and scrapped the increase on petrol... but left it on diesel.

Italian motorists, by contrast, are queueing up to purchase diesel cars: there, derv costs about half the current price of petrol. On

British roads, the 17-or-so mpg extra doesn't amount to any great saving either, for the 10,000-miles-a-year family motorist: derv engines make their economies on short, stop-start journeys, but are much less parsimonious over long-distance, high-speed running. For the family car in general use, annual diesel bills can be expected to be around £60 cheaper than petrol—£90 if there is a high proportion of town driving. Either way, it hardly justifies the extra outlay of £700-plus on the car purchase price.

Clearly, however, a high-mileage, short-haul town motorist could end up in pocket... which is why taxi drivers love diesel cabs.

Why, then, in the face of the limited practical appeal of diesel family cars are manufacturers producing them? The answer is that dervs are a compromise, bridging present and future technology, and providing car makers

with an opportunity to train engineers for the next generation of propulsion.

In 10-15 years, it is likely that many of us will be driving petrol cars with engines not unlike today's diesels—high-compression units, perhaps turbo-charged for extra performance. They will run on fuel similar to present-day 2-star petrol, and produce more power per cc than either diesel or the current breeds of petrol engines. They will also be relatively quiet, and emit less harmful exhaust gases.

Meanwhile, however, be warned: if you are a 10,000-miles-a-year man and opt for diesel, you will effectively be subsidising future automotive development...

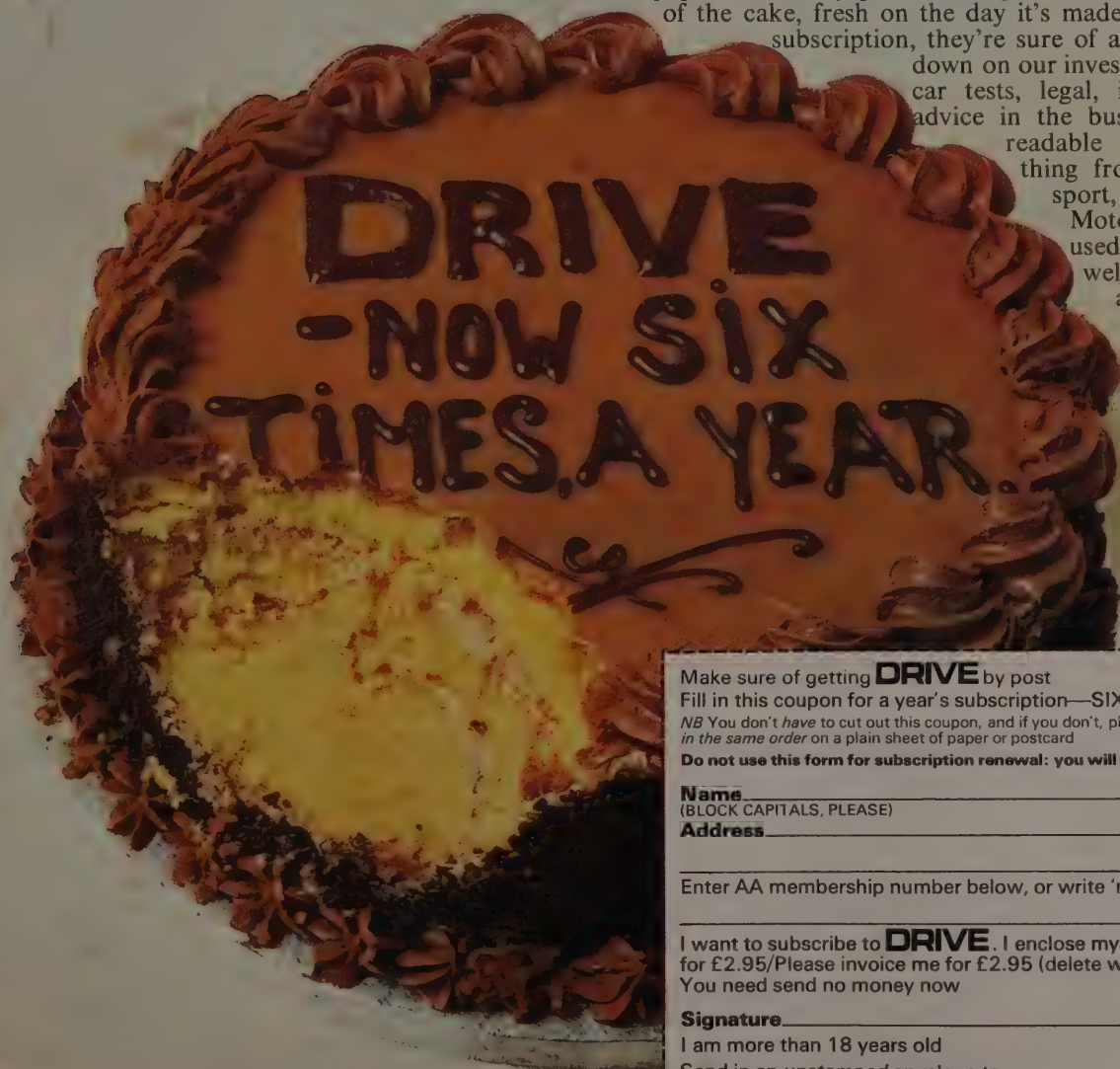
MARCUS JACOBSON

Chief Engineer of the AA

DRIVE invites letters from readers on the subject of diesel-powered cars—and indeed all matters related to energy conservation and the future of the family car.

SOME PEOPLE are happy to accept the crumbs from our plate—they read DRIVE's stories in watered-down form when newspapers inevitably pick them up. Wiser motorists get the whole of the cake, fresh on the day it's made—by taking an annual subscription, they're sure of all the fact-packed low-

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Calling all cat lovers

TODAY, a brand-new Jaguar XJ Series 3 costs at least £11,000 on the road—more than most of us would ever dream of spending on our motoring—and, like all big cars, it depreciates at a tremendous rate. It is, as yet, nowhere near scarce enough to attract classic-car enthusiasts; an ageing XJ6 doesn't interest the man who can afford to buy a new one; and the rest of us suffer distinct pains in the wallet just contemplating the cost of its spare parts.

So, who buys it—and why? Via Computacar, DRIVE found two men who were searching for a good secondhand Jaguar—or perhaps a Daimler—and sent AA engineers to inspect their 'best buys'.

Ray Ward, a 52-year-old Mancunian who describes himself as a 'small-time builder', wanted a Jag as a stop-gap while he waited for a BMW dealer to supply the latest 320 model. He planned to run the car for about 12 weeks—and hoped to make a profit on the re-sale.

At the other end of the country, accountant Peter Pearson, 50, from Kingston upon Thames, Surrey, was wondering what sort of Jaguar he could buy for under £2500. He was happy with his 1976 Lancia Beta, but his teenage son Mark was determined to see Dad behind the wheel of a Jag.

The Search in the North

Ray Ward and AA engineer Hugh Cleary drove only one mile to see the first prospect, a 1974 Daimler Sovereign 4.2 with only 30,460 miles on the odometer—a modest mileage that Ray was inclined to believe as the vendor was a friend. But he wasn't convinced that it was worth £4500.

'I knew the car was 100% genuine,' said Ray. 'Apart from a couple of well-repaired rust patches behind the headlamps, the body was magnificent. It had led a good life—owned from new for a couple of years, then passed on to the lady of the house for shopping trips. On

the test run, the steering pulled to the left and the gearbox made funny noises; but I didn't think the faults were serious. Altogether, it was a very impressive motor, but more than I wanted to pay.'

Second opinion

Rust behind the headlamps is common on elderly Jaguars, but this car had been well repaired and the AA's Hugh Cleary judged that £4000 was a reasonable price. The engine needed a tune-up, and, when the throttle was opened quickly, the automatic gearbox produced a curious knock in 'P' that suggested an imminent and expensive repair job. More obviously, the steering pull that Ray detected was caused by ball-joints so worn that they had virtually ruined the nearside front tyre.

Ray Ward's second stop was at a dealer's showroom in Stockport where a 1975 Daimler Sovereign 4.2 was on offer at £5250. 'The dealer told me that he would take £5000 if there were no trade-in,' said Ray. 'The car had done 42,000 miles, and there was little repair-work in evidence, but again I thought it too expensive.'

Second opinion

Rust in the tops of this Jaguar's front wings had been competently repaired, but the camshaft's clearances needed adjust-



SECONDHAND REVIEW SPOT CHECKS: DAIMLER/JAGUAR XJ SERIES

The **body** is sturdily built and generally rust-resistant, but blistering can occur at the top of the front wings around the headlamps where water gets trapped. The rear valance, through which the exhausts emerge, tends to be a trouble spot, too, and edges of doors and along the sills may show surface corrosion, especially if stone-chip damage has not been treated. Check that the underbody sealant has not cracked and allowed rust to set in, and examine brightwork—particularly

on wheel trims—for rust speckling. Check door and boot-lid sealing rubbers—if they are faulty, water will seep in—and look under floor and boot carpets for dampness and mustiness. Jaguars seem to receive their fair share of knocks and dings: look around the bodywork for poor repairs.

The well-proven, six-cylinder **engine** has an excellent reputation for long life: 100,000 miles are possible before major overhauls. If possible, start the engine from cold and check for frequent stall-

ing—it means that the automatic choke needs re-setting. Warmed up, the engine should idle smoothly—if it doesn't, the carburettors could be out of tune. Valve gear noise is likely, due to wear in the long timing chain and/or its tensioner and/or excessive valve clearances that will need re-setting by an expert. Oil consumption is normally fairly high—500 miles per pint; check oil level and condition and look for leaks at the rocker covers and other joints, especially the

expensive one from the rear main-bearing oil seal. Sniff out petrol smells caused by dribbles from the carburettor drip tube—the float levels may need lowering—and leaking pipes; the electric fuel pump may need a new O-ring (these last two are under the boot floor). Low ground clearance can mean knocks and dents in the exhaust and damage to its mounting points. The system should last 18 months to two years . . . and is expensive to replace.

Although early examples tended



Ian Dawson

ment and the engine was out of tune. The dealer responded by saying that he could arrange a two-year guarantee on major components and would throw in road tax and a service free of charge—a package deal that would have made the asking-price more attractive.

The final call of the day was in nearby Oldham, to see a 1976 3.4litre Daimler priced at £4950. Ward was tempted: 'It seemed like a bargain. The owner told me

that he had ordered a new XJS and had been offered £1000 discount if there were no part-exchange, so he could sell below the average secondhand price and still make a profit. He was very trusting, too—he just threw the keys at me and walked back into his house, leaving me free to drive anywhere.

'I thought it a good-looking car, but the AA engineer took it to pieces verbally. I had certainly missed a dent on the roof;

the boot lid didn't close properly; and the rear wing had been resprayed ...

'The service history didn't help much, except to suggest that the car had been driven only 6000 miles in the last two years, with a total of 38,000 on the clock.'

Second opinion

Hugh Cleary found evidence of extensive body works that conflicted with the owner's assurances that no repairs had

to feel jerky and flustered under pressure, the automatic **transmission** gives excellent service, but check for leaks from the transmission-fluid heat exchanger (oil cooler) in the bottom tank of the radiator. The manual gearbox is also strong and dependable, but the clutch will need replacing every 20,000 miles or so. Check for signs of wear and slipping. Vibration may signal out-of-balance transmission—possibly the propshaft—or faulty wheel balance. Rear hub bearings and

drive shafts require renewal every two to three years. Listen for knocks—audible with low-gear on/off jerks of the accelerator.

Check the **suspension** for leaks and age deterioration of all dampers, and examine rubber bush mountings for wear. Knocking and slackness on bumps suggest general wear in suspension joints, which will require renewal.

Uneven tyre wear often means **steering** ball-joint wear: check treads carefully, and make sure that all the tyres (including the

spare) are sound—*vital* on heavy, fast cars such as these. Expect power-assisted steering to lack 'feel' and be prepared for some 'hiss' from the system on full locks; excessive squeaks and squeals, however, indicate that the power steering has been strained, which will also result in leaks and drive-belt wear. Check the fluid pipes for seepages, and ensure reservoir level is correct.

Long pedal travel, poor, unbalanced performance and scored discs will result from a

neglected **braking** system, and a pulsating pedal indicates warped or distorted discs. Check for final-drive oil leaks spraying on to, and contaminating, the rear inboard brakes. Examine brake fluid for cleanliness and correct level, and ensure that hoses and pipelines are not age-cracked or corroded.

Give the **electrics** a thorough check—lamps, warning lights and so on—and ensure that all the switches work properly, particularly those for the heated rear window and fuel-tank cross-over.

been undertaken. Other faults were more familiar—the engine needed a tune-up, the spare tyre was punctured, and, despite power assistance, a distinct pull to the left could be felt in the steering. The last problem was a holed exhaust junction pipe that let gases blow noisily through.

The price was certainly on the low side, but the AA's man advised caution: 'The obvious discrepancy between what the owner told us and what I could see made me uneasy. Frankly, I just couldn't understand how the body had been damaged.'

Ray Ward eventually decided that all the cars were too costly for him and bought what he described as 'a banger': for £1700, he found himself a 1974 Daimler Sovereign 2.8 with 83,000 miles on it.

'Obviously it was shabby,' said Ray, 'but it wasn't bad. I noticed scratches on the paint, and rust behind the headlamps; and there was a judder when the car pulled away, but I wasn't alarmed by that as I'd encountered it before—it's a propshaft fault that should be reasonably cheap.

'The gearbox, steering and brakes worked well, and if I spend £500 I'll have a good runabout. I know I'm taking a risk, but it was a bargain and it should prove cheap to sort out. Time will tell...'

Second opinion

Cleary estimated that the 'banger' needed

£400-worth of servicing and repairs, which made it a reasonable purchase. 'Of all the cars we looked at, I considered this to be the best, despite its high mileage. In fact, I prefer a car that has a high mileage, and runs well, to a low-mileage model with mediocre performance.'

Mechanical wear was minimal—thanks, Cleary thought, to a high proportion of motorway-cruising miles. Apart from excessive valve clearances, the engine was healthy, and the automatic gear change behaved well in spite of a hefty oil leak.

The steering pulled to the left, and the pattern of tyre wear indicated worn ball-joints on the offside front. All other problems were cosmetic, such as rust at the top of both front wings.

Ray's evident experience of long-in-the-tooth Jaguars had helped him track down a prize that many a bargain-hunter would have missed, for his best-buy was heavily camouflaged by layers of road grime. Any less-expert punter, however, would be advised to take an engineer along, or his 'cat' Daimler might just bite back...

The Search in the South

Peter Pearson couldn't wait to find his longed-for Jag, and, even before DRIVE's engineer arrived, he had looked hard at a Jaguar XJ6 4.2—a 1973 model priced at £2175. 'It was advertised as having 54,000

miles on the clock,' said Peter, 'but I noticed that it was actually 56,000. The dealer said he'd been using it himself...'

'The car had a clean and quiet engine. The salesman took me for a ride and accelerated to 70mph in seconds to show me what it could do. I didn't see any rust, though the interior was showing wear.'

Sadly, the car was sold before Peter could make up his mind, so, when AA engineer Bernard Tasker arrived on the scene, the search was renewed.

First stop was a flat in Esher, Surrey, to see what sort of Daimler Sovereign 4.2 could be acquired for £1695. The answer was a 1972 model with 86,000 recorded miles and a host of problems. It was certainly not up to winning-over a Lancia owner...

Second opinion

Peter's choice looked very dowdy indeed, and, on closer inspection, Bernard Tasker noted that many areas had been poorly resprayed. He discovered a wealth of filler in the front wings, chromework was rusty, and the driver's footwell was wet; staining around the rear screen showed further evidence of a water leak. The near-side front shock-absorber mounting was cracking and rusted—although, in fairness, the owner offered to pay for its repair if the purchase went ahead.

Tick-over was far from smooth, and, by

Only £24.95!

DRIVE SPECIAL OFFER

POLAROID

POLAROID LAND CAMERA

shorting-out each plug in turn, Tasker tracked the fault to the number three cylinder. It might only have had a dirty plug . . . but it could have been expensive valve or piston troubles. On the road, noise from the valve gear was exceeded only by an alarming screech from the fan and steering-pump belts, which had stopped moving. The owner declared that 'a drop of oil' would stop the belts' racket. Quite right—but it wouldn't have started them moving!

A sonorous knocking from the rear was symptomatic of a worn suspension fulcrum joint, while an ominous clunking

from the power steering suggested expensive repairs to the rack. Tasker's conclusion? 'Its condition was typical of a neglected car. *Not* one that I would recommend.'

His confidence shaken, Peter Pearson nonetheless pressed on. A 1973 Jaguar XJ6 4.2, with 48,000 recorded miles, for £2495 looked a much better proposition. Peter was impressed: 'It was the only car in the garage that didn't have a disclaimer notice pasted over the odometer—in fact, it had previously been owned by the garage's solicitor. The only puzzle was

why the air-conditioning system had been taken out. No one seemed able to explain its disappearance.'

Second opinion

Before Bernard Tasker started the engine, the dealer pointed out that he was about to fit a new timing chain. Certainly it clattered, but otherwise the engine was healthy. The front carburettor's piston damper had blown out—a cheaper repair than the crack in the top corner of the radiator that the AA man quickly spotted.

The missing air-conditioning bothered Tasker, too: 'The compressor pump had been removed, and the fluid pumps left hanging. The dealer didn't have much of an explanation, simply saying that the previous owner "didn't want the luxury of air-conditioning" and that he didn't want to fit another system. If it wasn't for that, I would have advised Mr Pearson to buy the Jag, subject to a fuller examination. I'm always suspicious of cars that have been modified, especially when a valuable item has been removed.'

At this point Peter Pearson gave up looking for his dream Jaguar—and bought his dream house instead. All his available cash was poured into the move, though he remains keen on the idea of owning a big 'cat'. The dealers of Surrey may well be seeing him again . . . ROBERT OXFORD



Crash, bang, wallop, what a picture!

NOTHING could be simpler to use to capture unforgettable moments on summer outings this year than the Polaroid 1000 Instant Land camera. Its 3½-in-square full-colour pictures appear in seconds—no focusing, no cranking nor winding, just press a button and the camera does the rest. Outdoors, aim and shoot from 4ft to infinity, and the motorised film pack—powered by a tiny battery that comes built-in with the film—will deliver a picture every 1½sec. Indoors, the flashbar attachment gives

John Perkins is the photographer who, in the past year, has given DRIVE's front covers their very special style and appeal. Follow his 10-point guide to better pictures, and your summer successes with our super Polaroid 1000 will make you the family favourite . . .

1 I wish I had my camera How many times have you (and I) said that, and bitterly regretted the fact that it was hanging in the cupboard at home? The more you have your camera with you, the more often you will use it—and the better your pictures will become.

2 Think . . . pictures We all want to capture the truly memorable moments in life. Be ready to use your camera, swiftly, wherever you may be.

3 What's the light like? Squint at the world through half-closed eyes before you look through the camera's viewfinder, and you'll have an idea of how your picture will turn out. Soft daylight usually

allows better overall print quality. If you are in suntan-weather, try to stay in the sun OR the shadows, otherwise your prints will tend to be soot-and-whitewash, with bleached-out highlights, or black and shadowy without detail.

4 Get in close Stay near to the action in front of the lens—not five miles down the road from it. The closer you are to what's going on, the more involved you will be. Try taking one step forward, not two steps back.

5 Choose your angle Don't always stand upright . . . and get the boring, obvious shot. Crouch down occasionally, or stand up on a wall or a chair. Vary the camera angle interestingly.

6 Choose your moment Before taking a picture, always RELAX and snap at the decisive time—when the action, the smile, the light is at its best.

7 A gentle squeeze More pictures are blurred by camera-shake than by poor-quality lenses. It really is important to hold the camera comfortably, and to squeeze the

superb definition up to 8ft. At only £24.95, this DRIVE Special Offer must be one of the bargains of the year. For with the camera (which is protected by a three-year warranty) come a 10-frame pack of fade-resistant film, a 10-shot flashbar and a 7in-by-4½in-by-5½in soft, black vinyl case and carrying strap—all together worth more than £30. Fill in the coupon, and send it with cheque or PO payable to the AA. The offer, available only to readers in Gt Britain and N Ireland, closes 30 Sept.

DRIVE Camera Offer

NB You don't have to cut out this coupon, and if you don't please print *all* the same details in the same order on a plain sheet of paper or postcard

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Enter AA membership number below, or write 'non-member'

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Basingstoke, Hants RG21 2EA

PBM760

shutter release gently and evenly.
8 Learn from your mistakes Look carefully at your pictures, and especially at those that don't come out successfully. Try to work out what went wrong, and avoid making the same mistake twice.
9 Experiment, experiment Break

the 'rules' now and then. Do your own thing, and see what happens. Some of the best pictures are the results of experimentation.

10 Don't get disheartened Photography is an art form. And artists don't learn it all overnight—or even on a weekend in Widnes.

CAR TESTS

Hatchbacks may be handy, but nothing swallows a month's shopping quite like an estate...

Mazda 1400 estate

Price £3295 On the road £3429

When Japan launched its motorised invasion of Britain, Mazda cars were among the first wave. Six years later, their maker, Toyo Kogyo, ranks third-equal among the giants back home—but has still to create a yen for its products over here.

Learning from its ill-fated rotary engine days, Toyo now trades on Eurocar styling rather than mechanical novelty in its 323 hatchback range, and the new Mazda 1400 estate extends the idea—literally. Seven inches and a full-length tailgate have been grafted onto the 323's tail, making a five-door, keenly priced rival to the three-door offerings of Austin and Ford.

Against such established names, can the 1400 open more doors for Mazda as well?

How it goes

While there's only one size of engine offered on the estate, it is the largest in the 323 range—a 1415cc overhead-cam unit driving the rear wheels, as in Mazda's sporty SP hatchback. It's an obedient starter from cold, though the spark of life needs nurturing with generous doses of choke or the engine shivers noticeably for its first few miles.

In return for time to warm-up, the estate makes amends with a performance more suited to a thoroughbred than a workhorse. Despite its weight and size handicaps, DRIVE's test car clipped up to two seconds off our through-the-gears and top-gear acceleration times for the lively 1300cc Mazda hatchback we tested a year ago. Pit it against the more powerful Austin Allegro 1500 estate and it's still a one-horse race—the Mazda covers 0–60mph 2.4sec faster at 14.2sec. It's a product not just of a more efficient engine but also of the Mazda's smooth clutch and slick gear shift, plus well-chosen intermediate gear ratios that enable third to pull well past the motorway speed limit. For drivers with a lazy left arm, there's a fourth gear capable of delivering punchy overtaking bursts that would be very acceptable even in a lighter and more sleek saloon.

Our 323 hatchback test of 1978 complained about rough running at low speeds and of a drone that built up in the 50–65mph cruising range. It's something of an achievement that Toyo Kogyo has managed to moderate both faults in the estate's more cavernous body, but its overall noise level—and axle whine in particular—is disappointing compared to

such domestic rivals as Ford's Escort, and tends to discourage spirited driving.

The test car took exception to the recommended diet of 2-star fuel; 3-star is essential to prevent pinking—especially when the estate is hauling a full load. The fuel penalty for the extra luggage space and power compared to its 1300cc stablemate is a mere 3mpg increase overall. While 28½mpg is mediocre for motorway cruising, our car rarely drank any faster—no matter how hard it was pushed. A little restraint of the right foot was rewarded with 40mpg on longer trips, and the average from our 1000-mile test was 33½mpg—which stands favourable comparison with most of the Mazda's rivals. Long-distance drivers will have to be patient at the pumps, however: the estate swallows its last 1½gal only a sip at a time, so a hasty refueller could find the 10gal tank's effective range reduced to eight by the time the fuel gauge nudges 'E'. The filler cap is a crude affair, too, but it is hidden by a lockable flap.

To cope with the increased payload, the estate has semi-elliptic (cart) springs on the rear, where the hatchback uses coils. It's an unusual move—with predictable results: Mazda's normally tranquil ride deteriorates, particularly at low speeds, into a harsh and unyielding canter; and the body can set up a disquieting sideways

HOW GOOD

At-a-glance

DRIVE's verdict on the Mazda 1400 estate, taking into consideration its rivals, its price and what kind of car it's *meant* to be

Out of five

PERFORMANCE

●●●●●

FUEL ECONOMY

●●●●●

HANDLING/STEERING

●●●

COMFORT/REFINEMENT

●●●

INTERIOR SPACE

●●●●●

PASSENGER AIDS

●●●●●

DRIVER AIDS

●●●●●

ACCIDENT/INJURY SAFEGUARDS

●●●●●

EASE OF REPAIR/RELIABILITY

●●●●●

sway that occasionally helps to deflect the car off its course through a bumpy bend. Ultimately, and in contrast to the super-safe hatchback, Mazda's 1400 estate can be induced to swing its tail out of line by a driver who charges into a corner and then thinks better of it...

Owners may be discouraged from approaching these handling limits by the Mazda's steering system: lighter and more sensitive than most Japanese recirculating-ball mechanisms, it still fails to give sufficient sense of command for lively driving. Its vagueness compared with rack-and-pinion designs is most noticeable in crosswinds, when frequent corrections are required to assure the driver of a straight course. Around town, the system redeems itself, with tight turning circles and gearing that make light of parking-bay musical-chairs.

Despite the aid of servo-assistance, the test car's brakes produced their best stop only in answer to a hefty 110lb stamp on the pedal—right off our chart! It could be argued that such a massive effort lessens the danger of wheels locking under panic braking... but we can imagine some drivers failing to muster the required muscle in an emergency. Under normal conditions the disc/drum system performs quite adequately, biting in smooth progression with the pedal's pressure, and recovering promptly from bouts of hard use.

Inside story

Our testers were immediately impressed by the front seats' sensible shape and support, the good range of legroom adjustment, and the driver's excellent viewpoint—rare virtues all in an Oriental. As usual, the Mazda's main controls are considerably designed to make the least possible demands of the driver, with steering wheel, gear shift and pedals falling easily to hand and foot.

Most Japanese cars are aimed to impress instantly in the showroom, so it's surprising to find this Mazda's list of standard features is no longer than many a home-made rival's—no radio is included, for example. Instruments are rudimentary but neat, and clearly visible behind the two-spoke wheel, with a row of warning lamps ranged vertically between the main speedometer and water/fuel-gauge dials. The majority of minor controls are built into two column-mounted stalks—indicators, two-speed wiper with screenwash and main beam combined on the right, lights on the left. Old-fashioned and unilluminated push-pull switches on the fascia operate the heated rear screen and its wash-wipe—standard on the estate. Much to



Handy

MAZDA 1400 ESTATE

Front engine: 1415cc/4cyl. OHC (chain); one twin-venturi carb; 70bhp at 5700rpm
Rear drive: 4 gears; 17mph/1000rpm
Suspension: front—ind MacPherson struts, coil springs, anti-roll bar; rear—leaf-sprung live axle, telescopic dampers
Steering: recirculating-ball, 4 turns/29½ft circle; 4½ wheels, 155/80 R 13 radials
Brakes: servoed discs front/drums rear

Parts/repairs (inc VAT)
clutch £48 39 (fitting 2.2hr)
exhaust £62 97 (0.6hr)
headlamp unit £9 05 (0.3hr)
front bumper £49 44 (0.3hr)
laminated windscreen £43 14 (2 6hr)
oil filter and points £5 65 (0.4hr)
major service 12,000 miles (av. 3.5hr)

	per year	per mile
Running costs	£632	5.26p
Loss of value	£210	1.75p
Total depreciation	£927	7.72p
Insurance group	4/5	provisional

THE RIVALS CLOCK IN

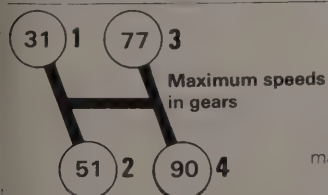
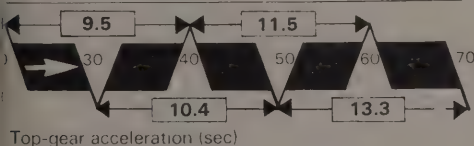
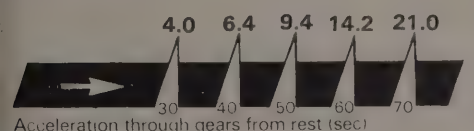
Austin Allegro 1500S estate
Chrysler Alpine GL
Renault 12TL estate
Subaru DL estate
VW Golf GLS 1460



fiver

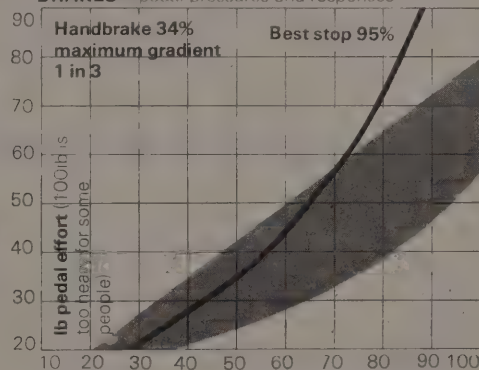
John Perkins

PERFORMANCE



max engine speed used 6000rpm;
max in top 5600rpm;
standing ¼ mile 19.5sec

BRAKES—pedal pressures and responses



% efficiency (ideal car's braking performance falls within central zone—above, too heavy, below, too light)
Fade test pedal pressure needed for 75% stop (ideal car would show no variation)
80lb at start, **60lb** in constant use, **80lb** in severe use
Watersplash **6** stops to recover

FUEL 3-star/94 octane mil
overall consumption 33½mpg
city 27mpg, range 277 miles, 4.11

Normal range of consumption

short journey, suburban	28mpg
hard driving, heavy traffic	23mpg
motorway—70mph cruising	24mpg
mixed roads—brake 50mph cruising	33½mpg
quiet rural—40mph cruising	40mpg

Consumption at steady speeds

30mph	53½mpg
50mph	34mpg
70mph	28mpg
max mph	18½mpg

SAFETY CHECKS

steering: energy absorbing?	No	hazard warning fitted?	Yes
front seats: secure mounts?	Yes	interior: well padded?	No
head restraint?	Yes	w/screen: laminated?	Yes
front belts: effective?	Yes	doors: crashproof?	Yes
convenient?	Yes	childproof?	Yes
rear belts: fitted?	No	petrol: spillproof?	No
		brakes: failsafe?	Yes
		load sensitive?	No

ON-ROAD PRICE (£)	CAPACITY (CC)	FUEL OVERALL (MPG)	MAXIMUM SPEED (MPH)	0-60MPH (SEC)	30-50MPH IN TOP (SEC)	BEST STOP (%) g/lb	OVERALL LENGTH (FT/IN)	MAXIMUM LEGROOM FRONT (IN)	TYPICAL LEGROOM REAR (IN)	STEERING TURNS/ CIRCLE (FT)
3439	1485	34½	90	16.6	11.5 4th gear	87/50	12' 11½"	40	39½	3½/34½
4046	1442	32	97	14.3	11.9	100/50	13' 11"	40½	40	4/34½
3623	1289	31½	87	16.6	12.4	100+/90	14' 5½"	40	37½	3½/33½
3455	1595	32½	88	15.5	9.5	96/100	13' 0½"	39½	35½	3½/32½
4030	1457	34½	96	12.8	10.9	100/50	12' 2½"	39	37½	3½/32½



the delight of one conservative DRIVE tester, this new car has a novel site for the horn button... in the centre of the steering-wheel boss.

All four doors open wide, but access for the less-agile to the back seat is hampered by narrow door apertures, intrusive wheel-arches and prominent sills. The thin-looking backrest looks uninviting, but closer acquaintance proves it well-angled and comfortable, with acceptable stretching room, and more generous headroom than in the 323 hatchback.

The backrest's slim profile is explained by the Mazda's method of converting into an estate: the rear seat cushion stays in place while simple trigger releases unlatch either or both halves of the split backrest for folding down. It's a speedy conversion that can allow one rear-seat passenger to ride beside a long load, but the design does expose the rear of the front seats to jolts from sliding luggage.

With the back seat in use, luggage space is reasonable for a small estate, but folding it results in a 56½-in-long carpeted cargo platform, with no rear sill to hinder loading and few intrusions into the load area. The tailgate

can be unlatched without a key (beware of road grime around the handle), and it's assisted upwards by two gas-filled struts, though not up enough to allow loaders to forget about avoiding its sharper edges...

It's a novel experience for DRIVE to complain about a Japanese car heater, but the main fault of the Mazda estate's is that it's speed sensitive; the faster you go the hotter it gets. Two clearly marked sliders make it easy to adjust and regulate the flow, but, at slow speeds in cold weather, the booster fan's help is frequently needed. Fresh-air vents are not linked to the fan, having sufficient ram flow at more than town driving speeds, and demisting is prompt if the flow is not shared between floor and screen. Electric screen heating does help at the back, but the indispensable rear wash-wipe mechanism clears only half the screen—and it's the wrong half.

Our main criticism on the safety front is the lack of roof padding, notably along the top screen rail. On the credit side, however, Mazda's child-proof rear-door locks are still an unusual Japanese feature, and the standard laminated screen and front head restraints are welcome.

Living together

Bituminous underbody sealant is scantily applied, but Mazda has tried harder to design corrosion out of the estate. Galvanised steel is used in vulnerable areas, and layers of plastic are applied wherever water or the joining of dissimilar metals might cause corrosion problems. It's a good first line of defence that the owner can always reinforce with a proprietary rust-proofing treatment.

Paint is well finished, and the test car's chrome plating was the best yet on a Mazda. Bumpers look sturdy, with rubber inserts and wrap-round wing protectors, and the smooth exterior lines of the estate, plus minimal trim and sturdy cloth upholstery, make valeting easy.

Home mechanics will love Mazda's utterly orthodox engineering. The chain-driven overhead-cam engine retains conventional rockers for easy adjustment, there's plenty of working room in the orderly engine bay, and there's even a set of tools supplied. Mazda dealers are as yet a rare breed, but with such a straightforward car we can't imagine many garages turning Mazda owners away.

To date, the insurance companies have not decided into which group the Mazda will slot. We suspect that it could be as high as 4 or 5—two groups higher than most domestic rivals.

Verdict

Family men among our testers learnt to like the Mazda as value-for-money transport. In exchange for the versatility of five doors in a body that's as roomy and better constructed than, for example, the costlier two-door Allegro 1500S estate, they were prepared to live with the Mazda's less-acceptable ride and noise qualities. Above all, when the family and the freezer food are unloaded, there's a chance to enjoy 4-star engine performance for the price of 3-star fuel. If Toyo Kogyo can refine the estate's few faults, the Mazda 1400 will more than meet the everyday needs of many private buyers.

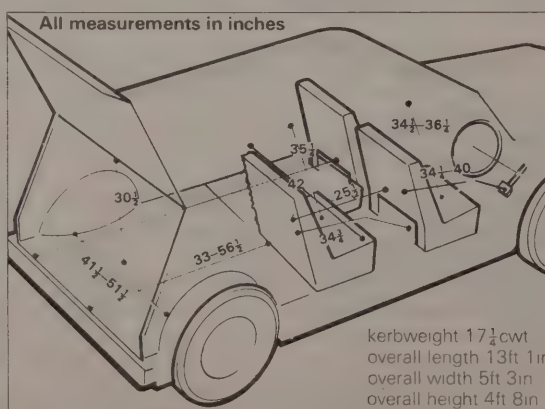


'A fabulous little car,' Denise Bewsy told DRIVE. 'The minute I got in, I felt happy. The driving position is excellent; the instrument panel's clear and easy to read; and I liked all those warning lights in one row. The Mazda is very nippy compared to the Allegro, making you feel that there's still plenty to come, even at 60mph in third. The steering may be light, but I didn't find it any less positive than the Allegro's. Although I prefer the look of Mazda's hatchback, the estate's tailgate is generously big. In fact the whole car gives the impression of being nicely put-together, even down to the way the carpet fits. For my money, the Mazda is streets ahead of the Allegro.'

Allegro-fancier Fred Pocock had his allegiance sorely tried by the Mazda: 'It looks very neat. The switchgear may be a bit old-fashioned, but it works well. I didn't like the tartan upholstery—it feels thin, and, as I often have keys on my belt they could rip the cloth. There's plenty of kneeroom for the driver, though, and lots of storage space, too. And, while it may be a rather noisy car, it is a nice noise...'

Estate-car owner Andrew Perry was unusually enthusiastic: 'It's the best car I have driven in years,' he declared. 'It's even better than the VW Scirocco, thanks to a fantastic gearbox. Fourth is a little disappointing—I felt it needed an overdrive gear—but third is fabulous. Yes, the engine is noisy, but it's an acceptable noise and seems to fit the car's lively character. I'd certainly consider buying it—or can I hang on to this one?'

DRIVE's Bob Oxford had to bite his tongue: 'Everyday drivers often disagree with professional testers when it comes to Japanese cars: let's just say that I'm surprised our Everyman team could be so critical of the Allegro and then ignore the Mazda's obvious failings in ride comfort... I liked the Allegro more and the Mazda less as I clocked-up the miles in both; but, as short test drives are the norm for a private car buyer, it seems to be quite obvious which of these two handy, 1½litre estates is going to appeal to the public.'



1½litre estate-car tests continue on page 56 with the Austin Allegro 1500S

Views to air? Tell DRIVE about your motoring and what it means to you. You can send letters for publication—unstamped—via DRIVE Directory, FREEPOST, Basingstoke, Hampshire RG21 2EA

Faulty Fords

Since 1973, I have owned one 1600cc and two 2litre Ford Cortinas—and replaced six camshafts at roughly 20,000-mile intervals. The latest, a 1976 2000E, had a new camshaft at 21,000, and another only 10,000 miles and six months later.

It is deplorable that Ford can turn out models such as these with built-in defects. True, the parts are getting cheaper, but is this because of the high turnover?

SJ Tirrell
Hackney, London

Radar 'guns'

I was interested in your comments on hand-held radar equipment (March-April issue). As the agents for Muniquip T3 equipment—the principal hand-held unit operated by British police forces—we welcome tests carried out by an independent authority. It was for this reason that we cooperated with the Automobile Association by providing a set to be subjected to tests.

We find it strange that the AA has not published that consultant's report, but has made references to the fact that it throws some doubt on the accuracy of the equipment. Would it not be in the interests of members of the Association if such a report were to be published?

Should the AA not be satisfied that its own consultant performed a thorough test on the equipment,

we should be willing to cooperate again in submitting the Muniquip T3 to a programme of tests by an independent authority—on the condition that the results were made public.

A Sedgwick Universal Autopayment, Kent
The AA believes that the time may not be too far distant when it is called on to support the defence of a member, or members, in court, and to challenge the way in which radar-trap 'guns' and suchlike have been used. This is why the report, currently in its hands, has not been published.—Editor.

The good news

We were delighted to read our mention in your Time Out feature (DRIVE March-April), although we do rather wonder what is meant by 'a more restricted menu'. Incidentally, the cost of lunch for two is not from £15—it's from £5.

TS Harvey
The Lowman Restaurant
Tiverton, Devon
In fact, we meant a restricted à la carte menu compared to the choice offered in the evening.—Editor.

Venerable bug

I bought my 1969 VW Beetle 1300 six years ago, with 33,000 miles on the clock. I have now done over 110,000 miles and have never touched the engine or gearbox. One of the original tyres is still on, and I have only just replaced another. The car has never failed to start and never broken down.

Pete Heed,
Barking, Essex
'Sounds great,' says AA technical services head Doug Houston, 'and it's probably a comment more on Mr Heed's driving than on his car. But I'd suggest that a nine-year-old tyre is likely to have deteriorated from age, if not wear.'



Tell us your worst multi-store carpark tales, we asked DRIVE readers in January, and we'll pay fivers for the best. Well, who'd have thought so many of you needed fivers...

CHELMSFORD, Essex

I parked my Beetle alongside a concrete pillar in Chelmsford, allowing maximum room for another car to use the neighbouring space without boxing me in, and went shopping with my wife.

We were back within 15 minutes—to find a large Vauxhall as close to our car as it is possible to get without touching. I waited 10 minutes for the other driver to

return, but—no sign of him.

Determined to extricate my car, I eased myself across the Vauxhall's bonnet and, unlocking and opening the Beetle's door to its maximum (a mere 4in), I slowly wriggled myself into a contortionist crouch. Then, with face pressed flat against the side window, I managed to reach the window winder with the tips of my first and second fingers and lower the glass.

Now I could climb into the car horizontally; I decided on the head-down-on-the-passenger-seat approach so that I could roll over into the driving seat, but, alas, I had reckoned without our pet labrador whom we had left in the back of the car. With one bound, he leaped into the front to welcome me, just as I was propelled

continued on page 64

GOING FOR BROKERS

Traffic Act cover in the period until the new certificate of insurance arrives. *Without that proof, you are driving illegally.*

What about blatant fiddling? John Smeaton is quite candid: 'I've seen it happen. An insurance agent deliberately under-quotes to make his deal sound attractive, then goes back to the client when the papers come through and announces that the insurer has put up his rates. It's a common complaint, though it doesn't always mean that the agent is a rogue. He may have mis-quoted due to inexperience, or not reading the up-to-date rate charts.'

Inflating the price is something else. 'Yes, that happens too,' admits Smeaton. There are, he points out, some circumstances in which a broker could justifiably ask a client for a fee—if he were being asked to recover uninsured losses, for

example, or if the client constantly changed vehicles. 'This should always be made quite clear,' he says. 'The broker should show the fee and the premium separately, and make sure the client is aware of it before he gets the bill.' But there are, BIBA knows, brokers who like their bread buttered on both sides, who take their commission and a fee without the customer realising.

The BIA doesn't like this, either. 'We don't have the power to say that brokers cannot inflate a premium but, to us, it amounts to dishonesty,' says Ted Dewbury. 'We would expect an insurer to cancel an agency if he found such a thing happening.'

It's a remedy that any insurance company has. It chooses who sells its policies, and can cancel agencies at any time. Which raises the whole question of responsibility... with the insurer on one

hand, the insured on the other, and the intermediary in the centre.

When the Insurance Brokers (Registration) Act was being drawn up, it was suggested in many quarters that companies should be held responsible for the actions of their agents, rather than wash their hands of mistakes and leave motorists to sort out muddles. John Smeaton would still like to see this as law, as a kind of 'second stage' of the Registration Act.

DRIVE agrees: it would be logical. A policy for insurance is drawn up between the insurer and the insured, and the final responsibility for getting the policy right should remain between the two parties. If insurance companies choose to use agents as middlemen, then they should ensure that their interests are properly represented. Failing that, cases like McNealy's will continue to occur.

CAR TESTS

Among the Britons facing the challenge of the Orient's express estates, BL's Allegro 1500S has a suspension plus

Austin Allegro 1500S estate

Price £3324 On the road £3439

Talk to some drivers about the finer points of car performance, ride and handling and they'll reply with a vacant expression. Such qualities don't head the shopping list of the buyer who wants only a motorised wheelbarrow to cart some bricks or his latest auction-room bargain.

For too long, such drivers have suffered stiffly sprung, echoing 'stretched saloons' in the belief that it's all part of the price to be paid for an estate car's extra inches. But why should comfort and cargo capacity be mutually exclusive, when Citroen's complex suspension system has proved that they're not?

DRIVE turned to Austin's unconventionally sprung Allegro 1500S estate in a search for home-grown space and comfort.

How it goes

Austin's answer to foreign sophisti-cars is a 1485cc transverse engine, with an overhead camshaft, driving the front wheels—impressive-looking on paper if not exactly built for get-up-and-go. DRIVE's test car choked-and-churned into early-morning life, and even with a thermostatic cooling fan took a mile to warm up.

Driven with restraint, this biggest-engined Allegro estate can be very economical indeed, our test car averaging 34½mpg over 1000 miles. Short commuter trips cut the figure to 28½mpg; but the fifth gear is worthwhile for the economy-minded 70mph motorist, who will see 31mpg. The tank is easy to fill if you take the last gallon gently, and 330 miles between petrol stops is possible. The test car, however, had a weakness for oil—a pint per 500 miles.

Many rivals with smaller engines can show the Allegro a thing or two about performance—it struggles to reach 90mph in overdrive fifth, and 92mph in fourth; 0-60 mph in 16.6sec was the best we could manage with little help from an unwilling gear shift, and a top-gear 30-50mph time of 15.1 sec will force most owners to change down for overtaking.

Four years ago, DRIVE complained about the Allegro's 'pudding' gearbox: the fifth-fourth change was difficult to make, the lever was inclined to balk at first gear, and it was easy to 'lose' reverse. On the evidence of our latest test car, things have not improved, and the transmission must rate as the car's least-happy feature. The clutch is light and smooth, but couldn't cope with a 1-in-3 hill restart.

Compared to some convention-

ally-sprung estates, the Allegro rides most types of road like a magic carpet, even though its Hydragas suspension falls short of perfection. It's good in theory—replace springs and dampers with four gas-and-fluid-filled 'displacers' that soak up shocks simply by compressing their contents, and compensate for bumps and thumps by 'plumbing together' the nearside and offside pairs—but, as our testers discovered while crashing over sunken manhole covers and bobbing along undulating roads, *something* is lacking...

Perhaps the system is too slow to react; perhaps it cannot keep 'in step' with the frequency of some road surface waves; either way, something could be learnt from Citroen. But if you enjoy a soft, bouncy ride, you'll love it.

Handling is always safe, for, even on a wet bend, the car refuses to wag its tail. With the power on, it displays a desire to press straight on, but cutting the throttle is all that's required to restore control. Steering is direct, if heavy, and with the familiar lack of 'feel' around the straight-ahead position. In some ways it's less satisfactory than Japan's much-criticised recirculating-ball designs.

DRIVE maintains that British brake systems are world-beaters, and the Allegro's servo-ed disc/drum combination certainly doesn't let the side down. Pro-

HOW GOOD

At-a-glance

DRIVE's verdict on the Allegro 1500S estate, taking into consideration its rivals, its price and what kind of car it's *meant* to be

Out of five

PERFORMANCE

●●

FUEL ECONOMY

●●●●●●

HANDLING/STEERING

●●

COMFORT/REFINEMENT

●

INTERIOR SPACE

●●●●

PASSENGER AIDS

●●

DRIVER AIDS

●●

ACCIDENT/INJURY SAFEGUARDS

●●●●

EASE OF REPAIR/RELIABILITY

●●

gressive in action, efficient and unaffected by heat and water, the brakes pleased our testers—once they got used to the slightly dead pedal response.

Inside story

Tall drivers bemoan the shortage of legroom, and shorties find the seat cushion too low for good vision. No tester complained of backache in the soft, shapeless front seats, but they didn't enthuse, either... While pedal positioning is good, the gear lever is a stretch away; the layout of minor switchgear can be mystifying; and the wipers seem set-up neither for right- nor lefthand drive.

Steering column stalks are borrowed from Triumph's parts 'bin', and their siting makes the Allegro an odd car out in Europe: contrary to EEC requests for standardised control-stalk layouts, the Allegro offers indicators on the right of the column (which helps a driver to signal and to change gear simultaneously), and two-speed wipers with wash plus flick-wipe facilities on the left.

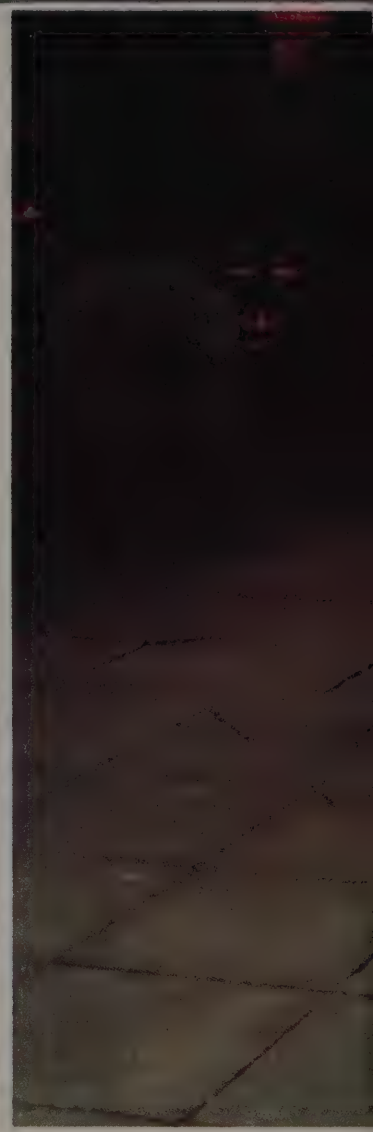
Being a Special variant of the Allegro range, DRIVE's estate car featured a clock alongside the speedometer, flanked by smaller fuel and water-temperature gauges. Warning lights, however, are kept to a minimum (four), and there is nothing to warn of an applied handbrake or forgotten choke. Modern rocker switches control hazard flashers and the rear screen's wash-wipe, while an older variety is used for the lights and rear screen heater—all scattered around the fascia, and all hard to find in the dark. A cigar lighter is a standard feature, but not so our test car's Unipart radio.

Austin is right in saying that estate cars do not have to creak and rattle, but our Allegro had a number of unwanted noises emanating from the fascia and the rear of the car.

Entry to the rear seat is eased by the front seats sliding forward as they're tilted—clever, but no substitute for four doors, which Allegro estates do not offer. (The extraction of heavy luggage is so much easier when you can open the rear side doors and *push*.) Used as a four-seater car, the estate does enable rear passengers to stretch out, but it's a pity that the seat is so bouncy.

With the one-piece seatback folded, there's a 58in load platform, with more space in a compartment under the carpet that also contains the spare wheel. There's more oddments space in a lockable glovebox, and on front and rear shelves.

Ventilation and heater controls are stiff to operate, but heat output is prolific without need for the two-speed fan. Achieving the right



AUSTIN ALLEGRO 1500S ESTATE

Front engine: 1485cc/4cyl, OHC (chain); one SU carb; 68bhp at 5550rpm
Front drive: 5 gears: 19mph/1000rpm
Suspension: front—ind wishbones, Hydragas displacers, fluid interconnections rear—ind trailing arms Hydragas displacers, arch springs
Steering: rack and pinion, 3½ turns/34¼ft circle; 4½C wheels, 145 SR13 radials
Brakes: servoed discs front/drums rear

Parts/repairs (inc VAT)
clutch £30.24 (fitting 1.6hr)
exhaust £28.54 (0.45hr)
headlamp unit £11.60 (0.45hr)
front bumper £20.71 (0.7hr)
laminated windscreen £32 (1hr)
oil filter and points £3.62 (0.6hr)
major service 6000 miles (2.95hr)

	per year	per mile
Running costs	£577	4.8p
Loss of value	£129	1.07p
Total depreciation	£723	6.02p
Insurance group	3	

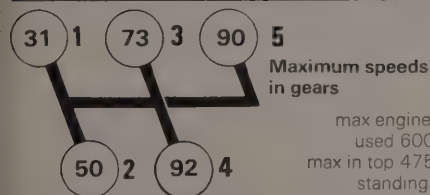
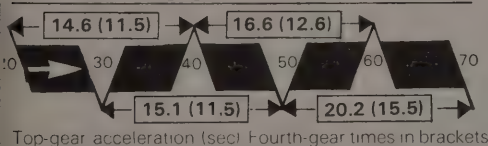
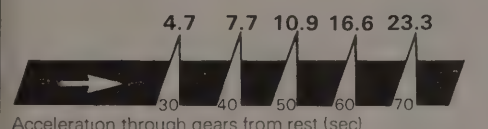
THE RIVALS CLOCK IN

Chrysler Alpine GL
Mazda 1400 estate
Renault 12TL estate
Subaru 1600DL estate
VW Golf GLS1460



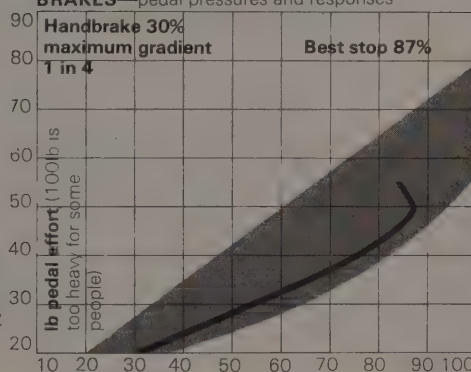
Smooth mover

PERFORMANCE



max engine speed used 6000rpm;
max in top 4750rpm;
standing $\frac{1}{4}$ mile
21.5sec

BRAKES—pedal pressures and responses



% efficiency (ideal car's braking performance falls within central zone—above, too heavy, below, too light)

Fade test pedal pressure needed for 75% stop (ideal car would show no variation)

40lb at start; 33lb in constant use; 44lb in severe use

Watersplash immediate recovery

FUEL 4-star/97 octane min
overall consumption 34 $\frac{1}{2}$ mpg
effective tank range 330 miles/9gal

Normal range of consumption

short journey, suburban	29 $\frac{1}{2}$ mpg
hard driving, heavy traffic	29mpg
motorway—70mph cruising	31mpg
mixed roads—brisk, 50mph cruising	35 $\frac{1}{2}$ mpg
quiet rural—40mph cruising	41mpg

Consumption at steady speeds

	4th	5th gear
30mph	50 $\frac{1}{2}$	57mpg
56mph	36 $\frac{1}{2}$	39mpg
70mph	29	31mpg
max mph	19	21mpg

SAFETY CHECKS 0 = factory fitted option

steering: energy absorbing?	Yes	hazard warning: fitted?	Yes
front seats: secure mounts?	Yes	interior: well padded?	No
head restraint?	0	w/screen: laminated?	0
front belts: effective?	Yes	doors: crashproof?	Yes
convenient?	Yes	childproof?	Yes
rear belts: fitted?	No	petrol: spillproof?	No
		brakes: failsafe?	Yes
		load sensitive?	No

ON-ROAD PRICE (£)	CAPACITY (CC)	FUEL OVERALL (MPG)	MAXIMUM SPEED (MPH)	0-60MPH (SEC)	30-50MPH IN TOP (SEC)	BEST STOP (% g/lb)	OVERALL LENGTH (FT/IN)	MAXIMUM LEGROOM FRONT (IN)	TYPICAL LEGROOM REAR (IN)	STEERING TURNS/CIRCLE (FT)
4046	1442	32	97	14.3	11.9	100/50	13' 11"	40 $\frac{1}{2}$	40	4/34 $\frac{1}{2}$
3429	1415	33 $\frac{1}{2}$	90	14.2	10.4	95/110	13' 1"	40	34 $\frac{1}{2}$	4/29 $\frac{1}{2}$
3623	1289	31 $\frac{1}{2}$	87	16.6	12.4	100+/90	14' 5 $\frac{1}{2}$ "	40	37 $\frac{3}{4}$	3 $\frac{1}{2}$ /33 $\frac{1}{2}$
3455	1595	32 $\frac{3}{4}$	88	15.5	9.5	96/100	13' 0 $\frac{1}{2}$ "	39 $\frac{1}{2}$	35 $\frac{1}{2}$	3 $\frac{3}{4}$ /32 $\frac{1}{2}$
4050	1457	34 $\frac{1}{4}$	96	12.8	10.9	100/50	12' 2 $\frac{1}{4}$ "	39	37 $\frac{1}{2}$	3 $\frac{1}{2}$ /32 $\frac{1}{2}$

balance can be fiddly, especially at night (the controls are not illuminated), and only the front door windows open for summer-day driving.

Our test Allegro clearly demonstrated the need for a standard laminated windscreen: the toughened one shattered and filled the interior with broken glass. (A laminated screen is a factory-fitted option, as are head restraints.) Hazard flashers are fitted as standard, along with dual-circuit brakes and anchorage points for rear seatbelts; but there is minimal interior padding, a vulnerable petrol tank and filler, and inadequate bumpers.

Living together

When rustproofing a car, it is sometimes possible to have too much of a good thing. Our test car's underbody protection had been so thickly applied to the more accessible surfaces of the wheelarches that it had split and was peeling off. Hard-to-reach wing lips were untreated, but black plastic shields protected the front wheelarches and sills from spray and stones. The floorpan gets a bituminous-type compound applied overall—including some masked areas, which are revealed later in production and

oversprayed with wax. Box-section interiors have a wax treatment, but door interiors and other more obvious rust-traps around the test car's sidelamps had unfortunately been neglected.

Paintwork we rate as 'could do better', with poorly finished roof gutters and several paint nibs and blemishes marring the body.

Usefully, the cargo platform's carpet can be popped free and reversed for carrying dirty loads; the rest of the carpeting has to be cleaned in situ.

For a front-wheel-drive car, the Allegro offers unrivalled access for DIY types, scoring well on our engineers' 22-point accessibility checklist. Battery, oil filler, radiator, master cylinder reservoir, clutch adjustment, fuel filler and tappet adjustment are all convenient, with only the fuel pump and brake pads being hard to reach.

Most accessory shops will have everything the Allegro owner needs to do his own servicing, and Unipart prices for spares are very competitive, helping to make the Allegro one of the cheapest cars to run.

If it *doesn't* run, then there's always Supercover, claimed to be the most comprehensive back-up service of them all. It's good for a

year, no matter how many miles you drive, and includes free membership of the Automobile Association to ensure that you always reach your destination.

And if you are still not satisfied, then a postcard is supplied with every new car that, BL Cars advises, should be sent direct to top man Michael Edwardes, who will 'make sure the problem is solved quickly and efficiently'.

Depreciation isn't steep either, with secondhand buyers keen to buy a name they know, while insurance companies acknowledge that Allegro owners are safe types by awarding a Group 3 rating.

Verdict

Cheap to buy, cheap to run and roomy for both passengers and luggage—what more could be asked of any estate car? Well, after 1000 testing miles, we'd have liked greater seat comfort to complement the Allegro's more-than-passable ride, more hush and more get-up-and-go.

A Marina-style revamp would help the Allegro to match sophisticated foreign rivals such as Citroen's GS range. Tight quality control would undoubtedly achieve more, since for most car buyers reliability rates higher than sheer driving excitement...



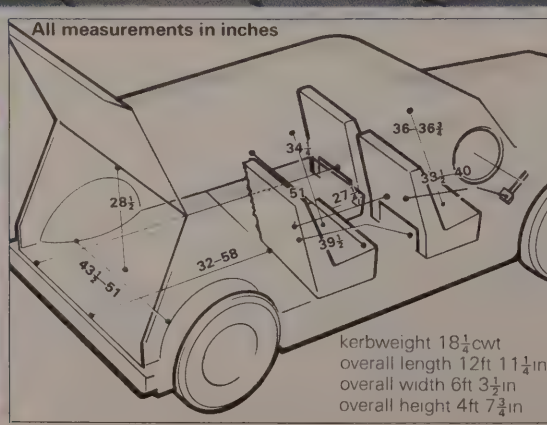
The Allegro was eclipsed for two of our three amateur testers by the instant appeal of the rival Mazda 1400. Poor workmanship and a shortage of doors were the deciding factors...

'Quite frankly, I don't think this Allegro is worth the money,' said Denise Bewsy. 'The test car banged and rattled, and I didn't like the gearbox at all. About the only thing I did like was the steering wheel's proximity to the fascia, so that you don't have to look miles into the distance to read the instruments. I see little point in giving the clock so much prominence—a rev counter would be far more use. The carpet looks as though it has been cut out with a carving knife, and the brakes are the worst I have ever encountered on a new car—I put my foot down and nothing seemed to happen.'

Fred Pocock told us that he had once considered buying an Allegro estate: 'The seats are very comfortable because you don't slide around on them, the pedals are well positioned for my feet, and I thought the gear change was good—until I tried going in and out of fifth. I don't know what Denise means about the brakes—I didn't have any problems. The back seat is fine, and there's plenty of headroom there, too; in fact, I had more problems getting into the back of the Mazda. For a small vehicle, the Allegro has a lot of luggage space.'

Andrew Perry made condemnation of the gearbox unanimous: 'The gear shift is wobbly and stiff to move, and I found myself looking at the clock instead of the speedometer. And two doors only on an estate are a disadvantage when it comes to climbing in and folding the back seat up again. The paintwork looks poor, and I noticed a paint crack above the rear vents where rust would love to lurk. The plastic sill protectors might prevent stone chips, but I bet they trap water as well. At speed, the Allegro is noisy, and I could see the bonnet vibrating up and down. In all, the longer I spent with the car, the more disappointed I became.'

DRIVE's Bob Oxford comments: 'I can understand Denise's opinion of the brakes, but she can't argue with our test equipment, which proved that the Allegro's brakes are well up to their job.'



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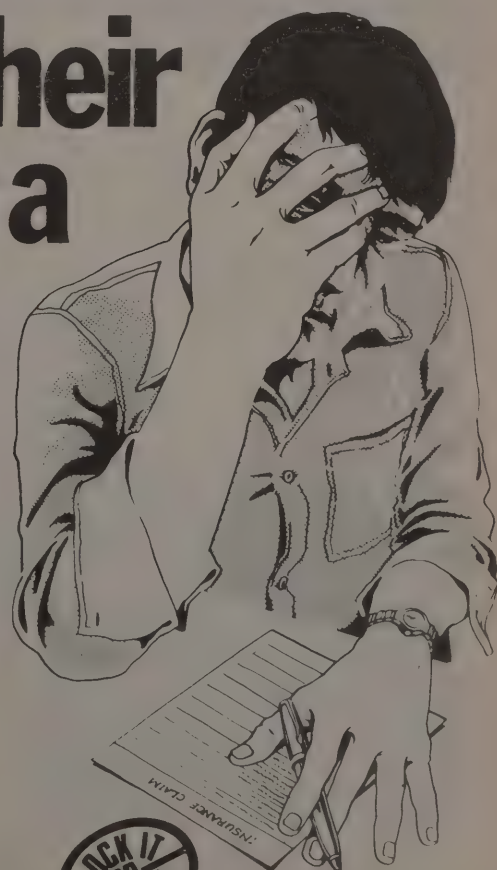
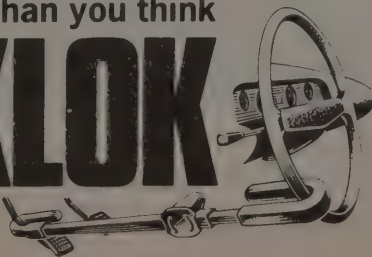
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J BULL'S FIRST CAR

Chaos in Cambridge

by KENNETH ROBINSON

WHEN I BOUGHT my first car, in 1953, I couldn't even drive. I had no knowledge of the internal combustion engine. I had no idea, in fact, that I was buying one inside the dumpy Hillman drop-head.

I had looked at the car every morning for three weeks on my way to the railway station. It was £250—a small price, I thought, for anything so beautiful.

'No, sir,' said the salesman on the telephone. 'That car has been £350 ever since it came in, a few days ago. Ah, well—you must be thinking of another one, sir. But I'll tell you what: we'll come to an arrangement.'

We did: I paid him £350. By that time he had explained why the car was worth it.

'Worth it, sir? That car belonged to a lord, sir. Hardly ever used it. You could take it to Scotland.'

I made the mistake of taking it to Cambridge. So it was my own fault, I suppose, that I didn't quite manage to get there.

The canvas of the hood stretched from the rear to a row of fixings above the windscreen. 'A small child could put it together,' the salesman had said. He hadn't mentioned that a small breeze would blow it apart. The fourth time it happened, there was a rending noise and the heavy rear window tore itself completely away from the canvas.

But it was not this that caused the worst delay.

'You know what's wrong here,

don't you?' said the mechanic, just outside Cambridge. I left him under the engine and returned, two hours later, to find him quite defeated. I had never seen the inside of a car until that day, but I remembered what it had looked like a couple of hours earlier.

'Shouldn't you have put this on before that?' I asked, pointing into the chaos. The man went very pale and had to go away for a lie down before dismantling his work. Since then I have always pretended to know even less than I do about engines...

But it wasn't the engine that caused the next hold-up. The whole offside of the car went missing. It was scraped off by a pantechnicon I met in a fog.

'The driver, I'm afraid, was killed instantly,' said a knowall, looking at my car, as I came back from the telephone. I had to spoil his fun because I needed the protection of the gathering crowd: the pantechnicon driver couldn't make up his mind whether to come over and hit me or to keep his finger in the hole I had made in his petrol tank.

My passenger survived. For a time I wondered if it was correct etiquette to marry a girl after I had almost killed her. I was still thinking about this when we shared another mishap, in Norwich. I pulled up a few yards behind a car with an East Anglian numberplate. 'ORT 1,' I said to the girl beside me.

She accepted what seemed like a proposal of marriage, and I was soon trading in my snazzy two-door model for a family saloon. This taught me, too late, to beware of auto-suggestion.

I also learned at this time that only a first car can be loved enough to be given a name. The little grey Hillman was called 'Cogey'—short for a Latin word that my regular passenger told me meant 'pushing from behind'.

I took her word for it. She was a Girton girl. You can, of course, always tell a Girton girl, but you can't tell her much. If it hadn't been for that first car, I wouldn't still be trying.

Clinic

Any problems? Whether they are technical, insurance or legal, DRIVE's experts can help. Write to: Clinic, AA, Fanum House, Basingstoke, Hampshire RG21 2EA

Short term

A few weeks ago I was involved in a pile-up and my Renault was written-off. Now my insurance company says that it will settle my claim for £600—provided I agree that my comprehensive policy is cancelled without return of premium. The policy has five months to run: shouldn't there be some refund?—MKNIGHT, SOUTHALL

It's doubtful whether any insurance company would give a refund when a policy has been cancelled following a total-loss claim. In law, the policyholder pays the insurer a premium to be covered for a specified period of time, usually one year. If an accident occurs at any time during that period, and the insurer settles the claim, the contract has been fulfilled and is at an end. You may be more successful asking your insurer for cover rather than money: some companies will continue a policy on a replacement vehicle, subject to premium adjustment that would apply to a normal change of car.

Season's grittings

The driveway to my garage is very steep, and I had to salt it heavily last winter to clear the snow and ice. Now, the concrete has broken up. Is there any compound, other than rock salt, that I could have used to prevent this from happening?—R BROWN, FELMERSHAM

In fact, it is the frost and snow that have caused your drive to break up—not the salt. The only practical alternative to rock salt of which we know is calcium chloride: it's used in some countries for de-icing roads because it is less corrosive to cars, not concrete. But it is also more expensive, even if you can obtain it in bulk, and we think you should stick with salt.

Changing ways

One hears little these days of 'double de-clutching'—a necessity in the days when gearboxes lacked synchromesh. I have been driving for 40 years, and I still double de-clutch out of habit. Is it a good idea?—L COSTA, LEEDS

Skilful double de-clutching can prevent premature synchromesh wear... not to mention the driver's satisfaction that it gives. With your experience, you may be adept, but it is a very precise operation and can be perfected only by constant practice on a 'crash' gearbox—not made since the 1950s—or cars with very weak synchromesh. The problem with double de-clutching on good-condition modern gearboxes is that, unless changes are correctly timed, a greater load than normal can be put on the synchromesh... and it isn't possible to tell whether or not you have made a mistake. You could, in fact, be doing more harm than good.

Clearing up fog

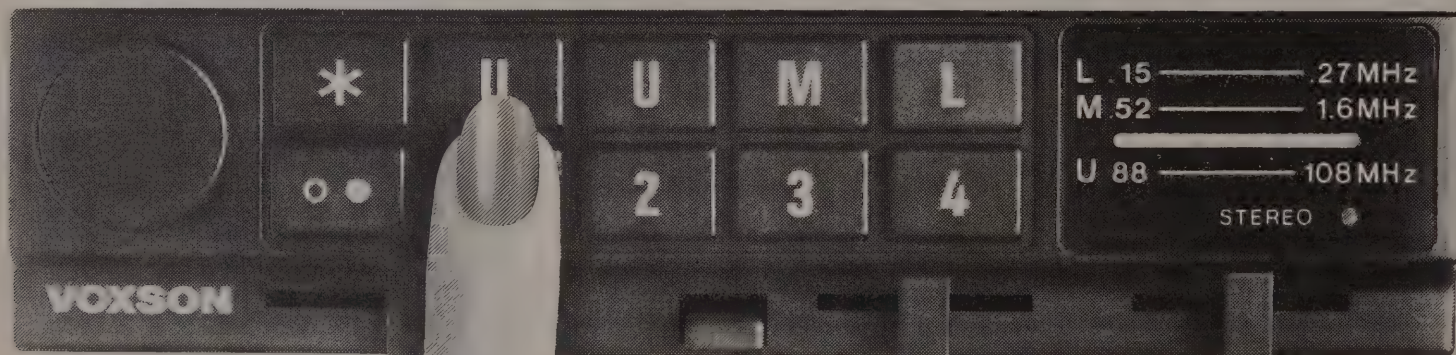
I've just read a newspaper report that rear foglamps are to become compulsory, with all new vehicles having them fitted from October 1979 and all vehicles needing them from April 1980. Is this so?—G W BEDFORD, DONCASTER

No. The intention is to make high-intensity rear lamps mandatory only on vehicles and trailers built from 1 October 1979 and first used on or after 1 April 1980. If your car was built before October or used before April, you don't require them.

Idle work

When my car's engine is idling and I switch on an electrical accessory—lights or heated rear window, say—there is a noticeable drop in revs. Is there a temporary short-circuit?—J BABCOCK, HEMEL HEMPSTEAD

There's nothing to worry about. By the sounds of it, your car has an alternator, with the result that current is produced at quite low engine revs. As you switch on various



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electrical items, the load on the alternator increases, which means that the engine ought to work harder to increase the alternator's output. As it's idling, it can't—so it simply slows down.

Secure insecurity

I always lock all the car doors from the inside when I am driving, but a friend tells me that DRIVE says this is unsafe. Why?—M HENTY, BASILDON

If your car was involved in a serious accident and you and any passengers were dazed or knocked unconscious, would-be rescuers could lose vital minutes struggling to open locked doors. With youngsters in the rear seat, it may be wise to lock rear doors; but it's better if childprooflocks are fitted—these mean that rear doors cannot be opened from inside, but open normally from outside for precisely this eventuality. Front doors, however, should never be made impregnable. In any case, most modern cars are equipped with 'anti-burst' locks to prevent doors flying open on impact, so locking them shouldn't be necessary.

Wheels within

All three spokes on my steering wheel have cracked where they meet the rim. Looking into the $\frac{1}{4}$ in gaps I can see strengthening rods that appear to be sound, and the wheel feels fine, but will the car fail its forthcoming MoT test for this?—P J EMERSON, STOCKPORT

It depends how zealous the MoT tester is and how strictly he interprets the letter of the law that says the steering wheel should not be broken. As your wheel isn't exactly broken, you may get away with it, but don't bank on it.

Try again

I am going to work in the Republic of Ireland for an unlimited period, and I've been told that I'll need an international driving permit or licence. How should I apply for this?—J BREEN, BILTON

Anyone visiting the Republic of Ireland for up to 12 months, and whose principal residence and place of business is outside the Republic, may drive on any valid licence. For drivers going to live there, the law is as follows:

You may use your current licence to drive to your home or to the first place at which you intend to stay. You must apply for an Irish licence, on form D5, to the authorised officer of the local authority of the area in which you will normally be resident—a full licence for one year will cost £2, three years for £6—and you must take a driving test before a full licence can be issued, unless (a) you have held a full Irish licence for any period within five years preceding the date of your application, and can produce the licence or confirmation of its issue; or (b) you have passed the local

driving test within the six months preceding your application.

If you cannot satisfy either of these conditions, you will have to apply for a provisional licence and be accompanied at all times by someone who holds a full licence, just like a UK L-driver.

Applications for driving tests should be made to the Department of Local Government, Driving Testing Section, O'Connell Bridge House, Dublin 2.

Star wars

I have just bought a Fiat 126 de Ville and have been told by two Fiat owners at work, and, indeed, by the dealer from whom I bought the car, that it needs only 2-star fuel. Yet your recent road test reported that 4-star should be used. Who is right?—P DEATKINS, DUMBARTON

We are! As a double-check, we asked Fiat, and it confirms that only 4-star should be used in the 126. A lower-grade fuel can cause 'pinking'—detonation due to abnormal burning of the mixture.

Pinky or perky?

Help! My 4.2litre E-type Jaguar runs only on 5-star petrol, and this is being 'phased out'. What adjustments should be made to the engine so that it can run on lower-octane fuel? And how will these affect performance?—J R BELL, SOUTHWOLD

Jaguar claims that all 4.2 E-types were designed to run on 4-star fuel. Only the 3.8litre version needed 5-star, so, theoretically, all should be well. You don't say whether or not the car 'pinks' on 4-star, but if it does its ignition timing should be retarded by 2 degrees (from 6 to 4, before top dead centre). Performance loss? Jaguar cannot give us any figures; it simply says 'a little'.

Old valve set

No matter how often and how carefully I set the tappets on my 1970 Ford Escort (and I do everything according to the book), the valve gear is never as quiet as I think it should be. What could be wrong?—F BERRY, EXETER

Rocker gear wear? If the rocker arm pads are badly worn and you are measuring the valve clearances with a feeler gauge, you are bridging the worn area and getting a false reading. One solution is to grind away the edges of the appropriate feeler, rubbing down the burred edges, until it is slim enough to slide between the face of the rocker where it is worn and the top of the valve.

A more accurate method is to use a tappet-adjusting tool that has a built-in micrometer: you wind in the adjuster until the rocker just touches the valve head, then back off the micrometer adjuster by the appropriate number of turns or clicks to find the correct setting. This automatically compensates for valve-gear wear.

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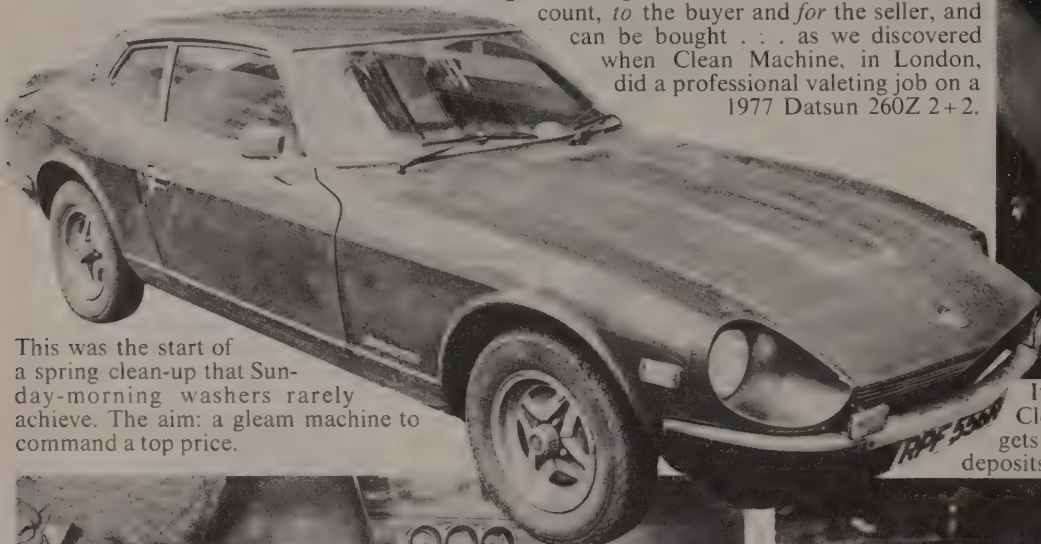
Thomsons (Carron) Limited, Falkirk, Scotland



What price a clean machine?

USED-CAR PRICE GUIDE

DRIVE's price-listing of 100 of the day's most popular secondhand models, opposite, assumes that cars are in good-average condition. First impressions count, *to* the buyer and *for* the seller, and can be bought . . . as we discovered when Clean Machine, in London, did a professional valeting job on a 1977 Datsun 260Z 2+2.



This was the start of a spring clean-up that Sunday-morning washers rarely achieve. The aim: a gleam machine to command a top price.



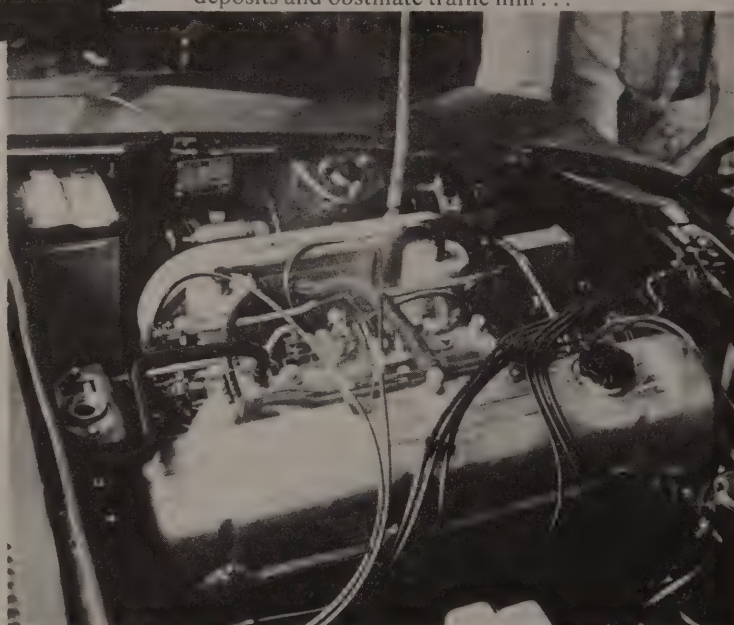
It's in painstaking attention to detail that Clean Machine scores: every nook and cranny gets a cleansing spray treatment to 'kill' oil deposits and obstinate traffic film . . .



The valeting is inside and out: pvc is shampooed with mild chemical to clean and restore appearance—a matt or a shiny finish is offered.



Amazing super-vacuum refurbishes carpets by injecting hot detergent spray into fabric and instantly sucking it out again. Dry in 24hr.



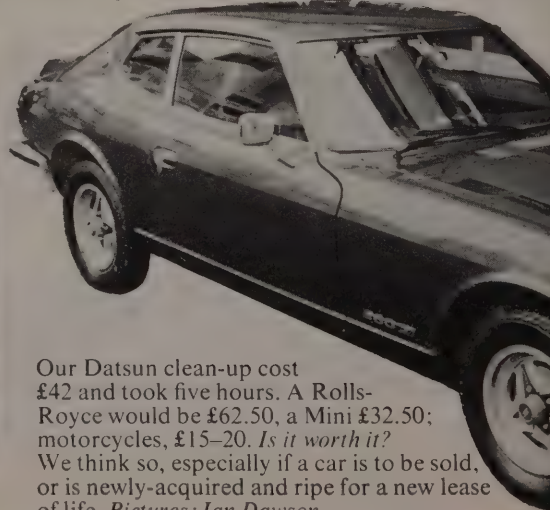
Engine cleaning costs £7.50 extra—not steam-cleaning, as in garages, but spray-on de-greasing followed by fiddly polishing by hand. Some owners are fanatical about spotless engines; most, says CM, don't care.



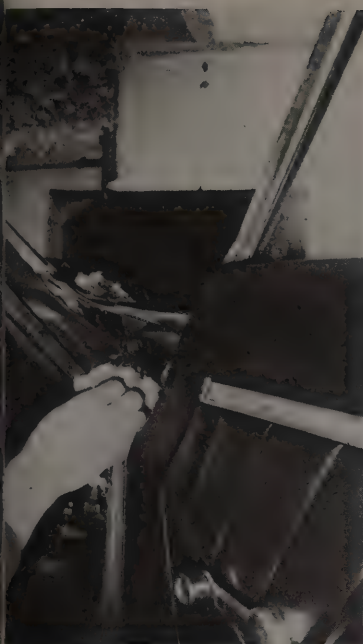
Glass gets a sparkle-up, inside and out. Some cars go in to Clean Machine every month for valeting.



Hidden extras: even the underside of the bonnet gets shine treatment.



Our Datsun clean-up cost £42 and took five hours. A Rolls-Royce would be £62.50, a Mini £32.50; motorcycles, £15–20. *Is it worth it?* We think so, especially if a car is to be sold, or is newly-acquired and ripe for a new lease of life. *Pictures: Ian Dawson*



... and is then mucked-out and polished by hand. (At no stage is the car washed.) The Lacroe wax is guaranteed for six months.



Neat touch: the 260Z's sill protector gets black-line smartener.



Glamorous alloy wheels can be ugly things to clean... even for 'pros' it's hands-and-knees work.



MAKE AND MODEL	AA Road Test Report No	Date	engine cc	mean top mph	0-60 in sec	overall mpg	fuel econ city	MODEL YEAR Average secondhand price guide							
								1979	1978	1977	1976	1975	1974	1973	1972
Alfa Romeo Alfased 1.3ti	D5/78	3/4/78	1286	98	12.5	34.5	5	—	2805	—	—	—	—	—	—
Audi 80L	389	6/76	1297	91	14.7	31.75	5	—	3565*	2825	2280	1810	1440	1115	—
100LS	314/RI 139	10/76	176*	100	12.7	29.25	5	—	4555	3840*	2500	2080	1710	1315	1065
Austin Morris Mini 850	340	5/74	848	75	26.1	41.9	1	—	1780	1515	1310	1050	905	770	655
Mini Clubman saloon	410	1/77	1098	82	13.2	40.5	1/2	—	2130	1840	1585*	1285	1095	945	805
Allegro 1300 Mk1 2-door	329	1/74	1275	85	16.1	34.75	2	—	2325	1985	1695*	1440	1210	1020	—
Allegro 1300 Mk2 4-door	377	2/76	1275	85	19.0	37	2	—	2455	2100	1795	—	—	—	—
Allegro 1500 estate	RI 127M	19/75	1385	90	16.6	34.25	3	—	2845	2435	2070*	1760	—	—	—
Maxi 1750 Mk2	263	1/72	1748	90	14.6	29.75	3	—	2825	2415	2035	1730	1455	1225	1010
Princess 1800HL	397	8/76	1795	96	14.2	29.75	4	—	3470*	2525	2155	1835	—	—	—
Princess 2200HL	RI 129N	19/75	2227	105	12.7	26.5	4	—	3865*	2600	2155	1835	—	—	—
Marina Mk1 1800 4dr	295	1/73	1798	96	12.8	31.5	3	—	2635	2255	1915*	1625	1370	1150	960
MG Midget Mk3	205	2/70	1275	93	14.8	29.1	4	—	2345	2070	1745	1465*	1235	1040	880
MGB Mk3	243	4/71	1798	105	11.8	23.9	6	—	3295	2850	2405	2030	1685	1415	1190*
BMW 1602 Lux	363	1/75	1573	94	14.4	29.0	6	—	—	—	—	2055	1860	—	1165
520i	327	12/73	1990	111	9.7	29.0	S/R	—	—	5770	4705	3790	3020	2380	—
Chrysler Sunbeam 1.6S	D6/78	3/4/78	1598	95	13.9	33.5	3	—	2870	—	—	—	—	—	—
Avenger 1.3 2-door	337	4/74	1295	83	19.0	30.5	2	—	2455	2095	1545	1320	1120	950	—
Avenger 1.6GLS auto	339	5/74	1600	93	13.9	26.5	4	—	3095	2640	2020	1710	1410	1195	—
Alpine S	381	4/76	1442	97	14.3	32.0	5	—	3180	2835	2410	—	—	—	—
Hunter GL 4-door	234	1/71	1725	86.5	15.0	28.7	3	—	—	—	1780	1505	1270	1065	885
Citroen 2CV6	RI 118	19/75	602	66	37.2	44.0	1	—	1495	1260	1060	885	—	—	—
Dyane 6	366	3/75	602	70	29.5	47.0	1	—	1585	1330	1100	925	765	640	525
GS Club	384	5/76	1222	93	17.2	33.0	4	—	2245	2050	1515	1245	1015	825	660
CX2000	416	5/77	1985	107	12.7	29.25	6/7	—	3965	3245	2625	2255	—	—	—
Colt Lancer 1400GL 4-door	371	11/76	1439	94	12.9	34.0	5	—	2640	2180	1805	—	—	—	—
Daf 66SL	317	9/73	1108	79	23.5	29.0	3	—	—	—	—	1025	860	725	—
Datsun Cherry 100A 4-door	284	8/72	988	83	17.7	41.25	3	—	—	—	1595	1365	1155	990	830
120Y coupé	336	3/74	1171	86	17.7	39.0	4	—	2400	2160	1845	1570	1330	—	—
Violet 140J	RI 132M	19/75	1428	94	15.5	32.0	4	—	2570	2075	1845	1490	1250	—	—
Bluebird 180B	316	8/73	1770	104	12.3	27.0	5	—	—	2170	1850	1560	1315	1105	915
Fiat 126	334/RI 138	2/74	594	62	60.0	48.5	1	—	1485	1275	1000	860	735	625	—
127 3-door Special	RI 137M	19/75	903	82	18.4	41.75	2	—	2150*	1635	1400	1185	—	—	—
128 4-door	320	9/73	1116	86	15.5	34.0	3	—	2020	1730	1475	1250	1050	890	735
131 1600S	369	6/75	1585	94	13.6	32.0	5	—	2985*	2360*	2020	1685	—	—	—
132 1800GLS	360	1/75	1755	102	12.0	25.0	5	—	—	—	2000	1645	1490*	1055	—
Ford Fiesta 1000HC	417	4/77	957	83	18.4	41.0	1	—	2070	1925	—	—	—	—	—
Escort 1100 Popular	RI 136M	19/75	1097	77	23.6	35.0	1	—	1940	1780	1530	1315	—	—	—
Escort 1300XL 4-door	292	11/72	1297	88	16.0	31.0	2	—	2650	2375	2050*	1495	1290	1100	940
Cortina Mk3 1600XL 4-door	323	10/73	1593	95	15.1	27.0	3	—	—	—	1945	1660	1415	1210	1015
Cortina 2000E estate	347/RI 116	19/74	1993	99	12.3	27.5	5	—	—	—	2565	2180	—	—	—
Cortina Mk4 1600	404	12/76	1593	89	15.3	27.0	3	—	2740	2535	—	—	—	—	—
Capri Mk2 1600GT	342	6/74	1593	102	12.4	27.5	5	—	3620*	2915	2515	2170	1945	—	—
Capri 3000 Ghia auto	RI 114	19/74	2994	113	9.9	22.0	6/7	—	5100*	4290	3605	3020	2625	—	—
Granada 3000GLX auto	282	6/72	2994	108	11.7	21.0	6	—	7080*	4580	3740*	2480	1910	1440	1015
Honda Civic 1200 3-door	362	3/75	1169	86	14.7	34.75	4	—	2240	1990*	1625	1380	1160	—	—
Accord auto	420	5/77	1600	89	14.7	32.0	5/6	—	3430	2885	—	—	—	—	—
Jag/Ro/Tri Jaguar XJ6 4.2	227	10/70	4235	117	10.0	16.75	6/7	—	9110	7850	6115	4805	3890*	2380	1985
Jaguar XJ12 (L) auto	305	4/73	5343	136	7.6	13.0	7	—	10400	8740	7230	5050*	3765	2330	—
Rover 2200SC	324	11/73	2205	104	12.2	24.0	4	—	—	3615	2950	2430	2005	—	—
Rover 3500 auto	330	2/74	3528	112	11.1	20.5	5	—	—	—	3490	2750	2255	1735	1390
Range Rover	252	7/71	3528	101	13.2	18.0	5	—	9705	8490	7525	6265	5100	4235	3445
Triumph Toledo 4-door (Dolomite)	345/RI 150	19/77	1296	83	19.8	33.0	2/3	—	2640	2280	1945*	1490	1280	1100	935
Triumph Dolomite 1850	288	9/72	1854	100	11.4	28.25	4	—	3370	2875	2500*	1935	1610	1340	1090
Triumph 2000 Mk2	219	6/70	1998	95	15.0	26.0	4	—	—	3245	2700	2330*	1935	1365	1115
Triumph 2500TC	RI 112	19/74	2458	101	11.5	27.0	5	—	—	3540	2875	2480*	1985	—	—
Triumph Spitfire 1500	376	2/76	1493	97	12.5	35.25	5	—	2675	2360	1985	1665	—	—	—
Triumph Stag	273	3/72	2997	118	10.2	22.5	S/R	—	—	5225	4285	3490	2825	2255	1785
Triumph TR7	401	11/76	1998	108	10.2	28.75	6	—	3665	2925	2480	—	—	—	—
Lada 1200	355	9/74	1188	91	15.0	33.25	3	—	1650	1400	1180	990	825	—	—
Lancia Beta 2000	RI 171	19/78	1995	107	11.2	26.5	6/7	—	3515	2950	—	—	—	—	—
Mazda 1000 2-door	343	6/74	985	78	20.0	33.5	3	—	—	1490	1270	1075	915	—	—
1300 hatchback	424/D4/78	7/78	1272	89	15.9	36.5	4	—	2380	2040	—	—	—	—	—
Opel Kadett S estate 3-door	338	5/74	1196	84	16.7	32.0	4	—	2595	2415*	1905	1615	—	—	—
Ascona 1.3SR	302	3/73	1897	96	12.3	25.5	6	—	3615*	2895*	2420*	1860	1505	1220	—
Rekord 4-door	287	9/72	1897	101	12.0	26.0	4	—	—	2625	2180*	1810	1490	1240	1065
Peugeot 104 4-door	325	11/73	954	84	17.3	36.5	3	—	2125	1860*	1585	1360	1155	1000	—
304	386	5/76	1280	92	16.7	35.5	3	—	2655	2320*	1955	1630	1355	1130	935
504GL	RI 140	19/76	1971	99	13.7	27.75	5	—	3765	3270	2675	2230	1860	—	—
504 estate	275	4/72	1971	98.5	13.8	24.5	5	—	4385	3865	3245	2700	2255	1885	1535
Reliant Robin	365	3/75	748	72	19.6	47.0	2	—	1905	1665	1440*	1130	1010	—	—
Scimitar GTE	303	3/73	2994	118	9.1	21.25	7	—	6315	5275	4360	3445	2850	2380	1935
Renault 4TL	RI 121	19/75	845	74	26.4	39.0	1	—	1995	1705	1440	—	—	—	—
5TL	349	8/74	956	85	19.7	42.0	2	—	2270	1945	1655	1400*	1180	995	—
5TS	370	11/75	1289	93	13.3	36.25	4	—	2620	2240	1920	1635	—	—	—
6TL (1100)	364	3/75	1108	82	17.9	37.75	3	—	2340	2000	1710	1440	1205	—	—
12L	385	5/76	1289	82	18.1	34.5	3	—	2345	1995	1730	1470	1230	1025	900
15GTL	D5/78	19/78	1289	95	14.5	33.5	5	—	3150	2700	2305	—	—	—	—
16TL	291	11/72	1565	93	15.1	29.5	4	—	2940	2490	2000	1755	1450	1195	975
Rolls-Royce Silver Shadow	312	8/73	6750	115	10.0	14.25	S/R	39225	34950	32950	25560	21600	21400	17700	15050
Saab 99GLE auto	393	7/76	1985	102	13.6	28.5	5	—	—	4235	3490	—	—	—	—

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Better Better Better Better Better

ling myself for it. His weight deflected me, and I finished with my head down in the passenger footwell, legs pointing skywards out of the open window. What's worse, I was pinned there by 7st of Labrador, licking my face.

I struggled for several minutes, but standing on one's head is not the best of positions for demonstrating man's mastery over his best friend. In the end, my wife, too, spreadeagled herself over the Vauxhall's bonnet, and attracted the dog's attention with some chocolate. As I made it into the diving seat with one last effort, a semi-circle of onlookers, lured by the impromptu cabaret, broke into applause.

Jack Phillips
Littleover, Derby

Parking in the multi-storey here is like taking an IQ test: the word 'Entrance' is displayed directly above the 'Exit' notice, and the true entrance is halfway round the town's one-way system. I finally located, took a ticket, and proceeded through the barrier and up to first level... where I was confronted with arrows directing me either left for parking, or right for parking and exit.

I chose the right turn—and found myself descending towards the check-out, with no chance of retracing my steps. At the kiosk, I was advised to hand in the ticket, and try again.

R S Smith
Rayleigh, Essex

SUNDERLAND Tyne and Wear

Look no farther than here for the worst multi-storey car parks. Certainly, many seem to have been built for Minis only: most bear innumerable paint traces of cars that didn't quite negotiate the obstacle courses.

Bruce Smith
Gorebridge, Midlothian

LONDON

Some friends and I went to London one Saturday to see the last Prudential World Cricket Cup final at Lord's, and parked in a carpark half a mile away. We returned about 9pm... to find the entrance blocked by a steel shutter and a notice, not there when we had left, saying that the carpark would not reopen until 7am Monday. Along with other 'imprisoned' motorists, we contacted the police, who eventually traced the key holder after midnight—but even he couldn't open up because there was a High Court injunction banning the lifting of the shutter between 7pm Saturday and 7am Monday to prevent disturbing nearby residents. There was nothing for it but to book into an hotel for the night and hire a car on Sunday to return home. And, on Monday,

my friend had to return the hired car and retrieve our car from the carpark.

The difficult part was explaining to our wives the necessity of an overnight absence after a one-day cricket match!

K D Corbett
Maiden Newton, Dorset

LEICESTER

My vote for the worst multi-storey carpark in the country goes to Leicester's Haymarket Centre. Access or exit is by way of a spiral ramp—and just how tight the curves are can be gauged from the amount of paintwork and tyre rubber left on the walls.

In the rush hour, hundreds of cars converge on the kiosk from at least four directions... and it's every motorist for himself. While all this is going on, there's actually a warning sign that flashes when exhaust fumes reach a dangerous level—but, despite the advice, no one switches off their engine. To be fair, though, one motorist who did obey the sign couldn't get started again. And you ought to have seen the chaos that he caused...

R Sylvester
Sharpley Hills, Leics

LIVERPOOL

Starters whine... engines bite... exhausts cough... and, amid a haze of blue smoke, the drivers jockey for position. No, it's not Le Mans—just St John's shopping-precinct multi-storey at 5.30pm. Within moments, every lane on every floor is packed solid with anxious faces, sweating palms—and stationary vehicles.

We have drawn a bad position on the starting grid—the top floor. After 20 minutes and a few yards, we turn off the engine. After 45 minutes and several stops and starts, we are at the top of the first downward ramp. Five minutes later, we move again, disappearing into a concrete tunnel like a rat into a drain. At the bottom, there's that long row of brightly-glowing brake lights again.

After two hours, we still have one floor to go, and, to make things even more chaotic, the evening theatre and cinema-goers are arriving. The result: two lanes of belligerent motorists fighting rather than filtering on to each 'down' ramp.

We reach the pay booth after 1½ hours' shopping and 2½ hours' trying to get out of the carpark... and have to pay a four-hour parking fee. As we leave, Lime Street station comes into view out of the murk. Damned silly place for a station. Why don't they pull it down, and replace it with a multi-storey carpark?

John Jansen
Great Sankey
Cheshire

Prevent premature baldness.



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Stare at this for too long and it will disappear.



The Triumph Dolomite 1500 Special Edition.

Rivet your attention on this car, and two things could

happen. First, you'll find yourself hypnotised by its striking good looks. Its air of quiet confidence. And you'll find yourself fantasising about getting behind the wheel, sweeping down the highway, and nonchalantly acknowledging the admiring glances.

But do that for too long, and there could be a disastrous consequence. By the time you've shaken yourself out of your reverie, every one on sale could well have been snapped up.

And all you'll be left with are your dreams.

The car is the Triumph Dolomite 1500 Special Edition. And so special is this edition, we've created only 2,500 of these black beauties.

The wheels have that special breed of styling normally reserved for sports cars.

The fascia and the door cappings are finished with

real burr walnut veneer. Whilst deep cut pile carpets elegantly complement the grey velvet seat facings.

Its standard equipment includes a push-button radio, tinted glass all round and the world's safest, most exclusive windscreen.

To own the only black Dolomite on the road, we ask only two things of you.

First, £3,925.*

Second, rather prompt action. Because it's likely to be Britain's fastest moving car this year.

Fortunately, though, there's always the consolation of knowing that if you don't get to own a new Dolomite 1500SE, the alternative—another Dolomite—is still streets ahead of anything else on the road.

The Triumph Dolomite 1500 Special Edition.



☐ Jaguar Rover Triumph Ltd

*Price (includes front seat belts, car tax and VAT. Delivery and number plates extra) correct at time of going to press. The Triumph Dolomite SE will be available from 8th May.

DRIVE



AA

July - August 1979 50p

the motoring magazine
that's so different

BMW 323i
Mercedes 280E
Renault 18TS
Ford Fiesta 950L
MGB GT
Triumph Spitfire

PLUS

Fiat X1/9

**the car for the boys
that gets the girls**

AA

**Bring a
little sunshine
into your
holiday...**



And a little shade too . . . when the sun starts getting too hot! The exciting new Wind and Sun Screen – developed on the continent and now available in the UK, through the AA. Forget about cumbersome old bits of cloth and poles you've had to make do with for years. The revolutionary aerodynamic shape of the new Wind and Sun Screen has you tanning yourself within a few minutes – it's so easy to assemble. Two semi-circular hoops of tubular aluminium slot into each other. They're covered by a coated nylon fabric (showerproof – just in case) and stretched into shape by two easy to fit tension bars at either side. Pegs and cords are supplied to anchor the screen even in the strongest winds.

The carefully calculated angles of the new Wind and Sun Screen allow the sun in, but wrap around and even overhead protection keeps the wind out. The aerodynamic shape allows the wind to blow past smoothly without causing back draughts on the inside. And when the sun gets too hot simply tilt, adjust the pegs and you're relaxing in your own sunshade! The Wind and Sun Screen comes in an easy to carry bag, and when assembled measures a big 6' wide x 4' 6" high and 4' 6" deep. Plastic pegs, nylon cord are also included, together with easy to follow assembly instructions.

And to add to your comfort even more the AA is making a fabulous offer of a De-Luxe printed Air Mattress size (deflated) 72" x 27" . . . ABSOLUTELY FREE! It's perfect for the beach or garden, and its attractive green printed design will be the perfect complement to your screen.

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payments of
£3.99



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Signed (I am over 18) _____

Enter Membership Number or NON-MEMBER

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a signature
cannot be accepted

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Item required _____ Ref. No. _____ Qty. _____

Wind and Sun Screen _____ 73228 _____ ;

For office use only _____ Skip out _____ ;

Offer applies to U.K. only, subject to availability. The AA agrees to hold prices until 31/12/79. NOTE: APPROVAL AND CREDIT FACILITIES ONLY APPLY TO AA MEMBERS.

Non-Members should enclose full payment with order. PBM770

AA

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WE call it 'the motoring magazine that's *so* different'. It's there, writ large on every cover. And it's the reason, we're sure, why so many of you buy DRIVE.

Different . . . well, in many ways. But perhaps most of all in our basic attitude to motoring. We enjoy it—and why not; there needs to be some joy in £1-a-gallon. But never, in the 12 years of DRIVE's existence, has adolescent 'worship' of the hardware blinded us to adult realities.

Yes, cars can dazzle and thrill—

we acknowledge their appeal, certainly, in this issue's car tests. But they can also rust and rot and burn and break, and hurry your bank account into the red. They can pollute and congest and disfigure and frustrate. Worst of all, they can take and damage lives . . . and then where's the fun and the irresistible fascination?

Thus, this issue, we acknowledge the pain and the appalling *waste* that can follow a moment's careless or incompetent driving, and without

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apology turn your thoughts towards the 'unacceptable face' of motoring—see page 32.

We also take a fresh look at smoking (page 10); tell motor manufacturers what you told us about new-car delivery drivers' antics (page 4); survey again the seatbelts saga (page 9); climb aboard two of motorcycling's bigger bangers (page 42); and sign-off our Long Term Test Club's Citroen CX2400 Super (page 35)...

We also learn why a lady loves a

Spitfire (page 34); put out your fire with a powder puff (page 31); give you all the new-car (page 4) and most of the used-car (page 56) prices; put a price on the miles that you travel (page 47); and generally pack the mag with *more* of all that's *different* for your 50p-thank-you-very-much.

**Now it's over to you, to read us—
and then write us!**

- the Editor

Monitor Monitor Monitor Monitor **Monitor** Monitor Monitor Monitor Mon

Book lovers

The only way that car-odometer tampering can be beaten is to reintroduce logbooks. That's the message from the collective body of Britain's largest local councils, the Association of Metropolitan Authorities.

Mileage-rigging cases, where clocks have been turned back to give false readings, feature large among complaints to local-authority trading-standards departments, and Councillor Jack Moultrie, the AMA's chairman, claims: 'The voluntary code of practice is clearly inadequate to control rogue secondhand car dealers.'

Moultrie admits that it is possible that technical developments may soon make it more difficult to rig odometer readings, but he insists: 'Many of our members and officers would like a return to the old logbooks which give buyers an instant record of the vehicle's previous owners. If, additionally, there were an obligation to record the mileage shown on the odometer each time the car changed hands, there would be an extra check immediately available to potential customers.'

Child-minders

Child Killers

L-drivers are being alerted to children in a special project

launched by RoSPA as part of the International Year of the Child. The society, concerned that 41,000 children are injured on Britain's roads each year, is mounting a campaign to persuade learners that every child carries an 'invisible L-plate', too.

More than 6000 driving schools

are being sent detailed lesson notes issued by RoSPA. David Larder, RoSPA's director of safety education, tells **DRIVE**: 'Many drivers, particularly the young ones, forget their childhood. Many of the accidents to children happen simply because they are children, and cannot

understand speed and distance in the same way as adults. The responsibility for their safety rests in the hands of drivers.'

Undoubtedly it also rests with parents, who seem increasingly to allow young children out on to busy roads and dangerous pavements unaccompanied...



'The car that keeps going when all others stop.' That's how they're promoting the Sealander, claimed to be Britain's first true aqua-car.

Produced by Sealander Vehicles, of Southampton, the Sealander is 17ft 6in long and 6ft 2in wide, and is powered by a Ford 3litre V6 through a five-speed gearbox. And designer Graham Kemp says that his baby is 'unsinkable', being made of glass-fibre and stainless steel and stuffed with foam chips.

When it comes to leaving terra

firma, Sealander's wheels are lifted hydraulically and the air-cooling system is switched to water-cooling—seawater. Inside, there's seating for four plus room for two auxiliary seats and additional luggage.

Sealander Vehicles, now developing a whole range of amphibians, is hoping to stage a London-Sydney journey later in the year, for which it is seeking sponsors; a former Hovercraft pilot has been signed up to complete the trip. Interested? Contact Graham Kemp at Locks Heath 84376.

Beneath the covers

It's a year since the collapse of Revolution Oil International left 70,000 motorists bereft of the extended-warranty cover for which they had paid. Since then, at least two other companies peddling similar schemes (and which, like Revolution Oil, earned a reputation for conjuring-up every excuse to repudiate claims), have also gone to the wall, again leaving thousands of motorists holding worthless pieces of paper.

Despite these events, the law still hasn't been changed to prevent rogue operators setting up in the extended-warranty business. What is especially worrying is that the Department of Trade itself admits that it is investigating the affairs of a handful of the 40 or so firms offering used-car warranty packages.

Add to this the view of AA legal services that, on the strength of members' experiences, three companies are currently 'giving cause



Protected Eagles No.2

Harpy Eagle

The world's largest eagle, the female weighing up to 20lbs. Despite its size, the Harpy flies with great agility through the dense jungles of Central and South America. Like all eagles, the Harpy Eagle is a protected bird.

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Eagle Star Insurance

for considerable concern', and the picture is clearly far from healthy. Says a DoT official: 'Firms that run warranty schemes as insurance business, or act as intermediaries for insurance companies, are subject to strict legislation. But when companies operate them as a cover for promoting the sale of oil additives, say, the law becomes vague and complicated.'

'I must admit that it would help me if the law were made more specific to bring such firms within the orbit of insurance legislation, which insists on a proper financial structure and sufficient assets to cover the proposed business.'

As it happens, insurance legislation is scheduled for revision in the next two years. It can only be hoped that it will block the loopholes so far as vehicle extended-warranties are concerned.

Total recall

According to a British Safety Council investigation, there are more than a million defective cars on Britain's roads 'due to the cynical connivance of the Transport department with motor manufacturers', which is depriving 'unsuspecting drivers of information vital to their safety'.

Strong stuff.

But, in advocating the adoption of the American system, in which motorists have, for instance, ready access to information relating to cars that have been the subject of recalls, the BSC could actually be putting forward some-

thing that would make the situation worse. For US manufacturers are today so frightened of the possibility of court actions that they are mounting recall campaigns over the tiniest faults. So much so that the public is now becoming immune to them.

Last year, for instance, 14½ million vehicles were involved in recalls, but owners' response to these campaigns was a frighteningly low 40%. (In the UK, now that manufacturers and importers can make use of the DVLC computer at Swansea, the recall response is around 80%.)

Perhaps the BSC would have done better to press for distribution of manufacturers' confidential service bulletins on safety-related items to all repair garages, and make them available to DIY owners on request. At the moment, these go only to franchised dealers—despite the fact that, in the second year from new, a quarter of owners have their cars serviced by non-franchised garages and therefore miss out on subsequent factory-recommended modifications. Indeed, surveys show that this figure increases three-fold in the third year.

Galloping consumption

With the government's energy-saving campaign building up to a climax in October—and the even more cogent argument of garages threatening to restrict opening hours or supplies during peak

continued on page 8

AA's AGM

An operating surplus of £1,901,000 and an all-time-high membership holding of 5,289,750 were declared at the AA's Annual General Meeting, held in London on 17 May. 'Such figures,' declared the chairman, Lord Erroll of Hale, 'are a double vindication of the Association's policies, both in internal financial-management terms and externally in the continuing high standard of service.'

During the year, Lord Erroll continued, the AA dealt with 2.7million breakdowns—more than 90% of them attended by AA patrols, the remainder by garages. There were 146,100 Relay recoveries to all parts of the UK. More than 250,000 AA members received legal aid. Nearly £2½million uninsured losses were recovered at home and abroad. Four-hundred thousand Continental travellers took out AA 5-Star Service. The total number of AA 'spanner' garages increased to 4198. More than 97,000 new motor policies were issued (more than 500,000 policyholders now insure via AA Insurance Services). And two AA road atlases each sold over 100,000 copies...

In 1978, the AA also involved itself for the first time in MoT testing—at its W Bromwich vehicle-inspection centre. And, of course, was active in opposition to government—against the proposed abolition of vehicle-excite duty, and the additional tax on petrol; the uncontrolled introduction into this country of hand-held electronic speed-

detection devices; and continuing cut-backs in roads expenditure and maintenance—and in support of seatbelt legislation proposals.

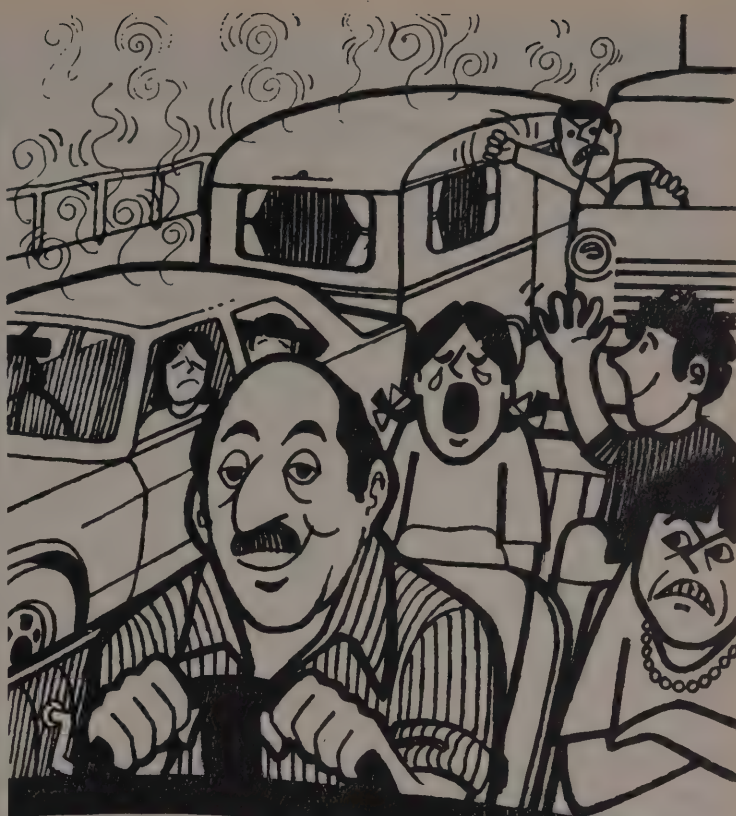
(During the AGM, the Director General, Mr Olaf Lambert, gave an address entitled, 'How the AA seeks to influence public opinion'.)

Lord Erroll's introductory remarks were supported by Professor Esmond Wright, honorary treasurer of the AA, who spoke of 'progress on all fronts' during 1978, pointing to a 20% increase in membership and Relay subscriptions—to £53,827,000—and to a 40% income-increase (to £23,245,000) from other sources—proof that AA commercial services had had 'a very good year indeed'.

AA Travel returned just short of £6million income, an increase of 35%; sales of books and merchandise exceeded £8million, an increase of 52%; and AAIS increased its turnover by 39% to nearly £5million.

'As the commercial services mature,' said Professor Wright, 'it is evident that they are fulfilling a clearly defined need for fully tested, high-quality services linked to motoring.'

The honorary treasurer also drew attention to net assets, increased by 26% to £42,182,000, that revealed major investment in, and improvements made to, AA garages, Relay depots and the road fleet that is the backbone of AA service—provided by people, the staff of the AA, to whom Lord Erroll also paid generous tribute.



How to keep your cool in the hot seat

You know the feeling, we're sure.

The road's blocked, you're following a lorry, and the guy behind keeps hooting. The sun blazes down. The kids start crying.

And then the temperature needle moves into the red area.

Hot sweat turns into cold.

A new Waxstat radiator thermostat helps your car's engine keep its cool. Easily fitted in minutes without special tools, it could make all the difference between an enjoyable ride or a nightmare trip!

And a new Waxstat radiator pressure cap is an excellent way of topping your car's cooling system ...

Pick up a WAXSTAT® now from your garage or accessory shop – and keep your cool

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Chard
Somerset

A MUST FOR YOUR TOURING KIT



What's it called? How much does it cost? DRIVE's superguide to the latest prices of new cars currently available in Britain tells you all you need to know, immediately, whether you're buying or just browsing. And our prices aren't just what the manufacturer says: we tell you the size of the cheque you can expect to write to put your new Mini or Rolls on the road, seatbelts, numberplates, road-fund licence and delivery paid. Want to know more? Well, if the car of your choice has a DRIVE/AA road-test report number beside it, you can have a copy of the best car criticism in the business. AA members can apply to their regional AA office—address in *Handbook*. Otherwise, write to DRIVE New-car Price-guide, Fanum House, Basingstoke, Hants, RG21 2EA. But we must now ask readers who request more than one to pay 10p for each report.

(a) denotes road test on automatic model only; delivery charges where applicable estimated on an average 200 miles.

	Manual	Auto	DRIVE/AA Road Test
AC (20 dealers)			
3000ME	12574	—	

ALFA ROMEO (135 dealers)			
Alfasud Super			
1.3 (1286cc)	3150	—	
Super 1.3			
(1350cc)	3249	—	
Super 1.5	3399	—	
Ti 1.3	3450	—	D5/78
Ti 1.5	3650	—	
Sprint 1.5	4549	—	D6/79
Giulietta 1.6	4549	—	
Alfetta GT 1.6	5049	—	
GTS	5550	—	
2000L	5449	—	
GTV2000	6049	—	
GTV Strada	7549	—	

ASTON MARTIN (13 dealers)			
V8	27094	27094	
V8 Vantage	29093	—	
V8 Volante	33959	33959	
Lagonda	—	37500	

AUDI (340 dealers)			
80LS	4765	5058	
GLS	5315	5608	
100 Avant L	5455	5920	
L 5S	5905	6398	
GL 5S	6400	6893	
Avant GL 5S	6660	7153	R1176
GL 5E	7055	7548	D8/78(a)
CD 5E	—	8700	
Avant CD 5E	—	9005	

AUSTIN MORRIS (1856 dealers)			
Mini 850	2380	—	RTR340
1000	2503	2888	D3/78
Clubman			
(998cc)	—	3158	
Clubman			
(1098cc)	2773	—	RTR410
Clubman			
estate			
(998cc)	—	3397	
estate			
(1098cc)	3012	—	
1275GT	3111	—	
Allegro 1100DL	2716	—	
4dr	2819	—	
1300S 2dr	3033	3398	
4dr	3136	3501	RTR377
1300 estate	3314	3679	

1500 4dr	3235	3600	
1500SP 4dr	3574	3939	
1500S estate	3439	3804	D9/79
1750HL 4dr	3785	—	

Vanden Plas			
1500 4dr	4296	4661	
Marina 1300	3104	—	
4dr	3225	—	
1300L	3350	—	
4dr	3439	3787	RTR392
1300HL 4dr	3795	4143	
1300 estate	3673	—	
1700 4dr	3508	—	
1700L 4dr	3731	4079	
1700HL 4dr	4114	4462	D4/79
1700 estate	3881	—	
1700L estate	4144	4492	
Maxi 1500	3815	—	
1750	3982	4393	RTR263
1750HL	4199	4610	
1750HLS	4314	—	
Princess 1700L	4089	4523	
1700HL	4390	4824	
2000HL	4629	5063	
2200HL	4995	5429	D11/78
2200HLS	5551	5985	

BENTLEY 72 dealers)			
T2 Series	—	32173	
Corniche	—	46728	
Convertible	—	49629	

BMW			
316	4849	—	R1149
320	6099	6769	
323i	7099	—	
518	6399	—	
520	7449	7859	D11/78
525	8499	8953	
528i	9649	10102	
633CSi	—	16549	
635CSi	17749	—	
728	10649	11148	
730	12549	13048	
733i	13749	14248	

BRISTOL (1 dealer)			
412 S2			
convertible-			
saloon	—	29356	
603 S2	—	32474	

BUICK (5 dealers)			
Century	—	9052	

CADILLAC (5 dealers)			
Seville Elegante	—	20492	
Elegante (lhd)	—	18263	
Seville	—	17293	
Seville (lhd)	—	15064	

Fleetwood-			
Brougham			
d'Elegance	—	14951	

CATERHAM CARS (0 dealers)			
Super Seven TC	4719	—	
1600GT	4167	—	

CHEVROLET (5 dealers)			
Caprice Classic	—	12166	
Classic (lhd)	—	10078	
Classic estate	—	12283	
Classic estate	—		
(lhd)	—	10195	
Monte Carlo			
coupe	—	9324	
Corvette (lhd)	—	11532	

CHRYSLER (650 dealers)			
Sunbeam 1.0LS	2800	—	R1164
1.0GL	3048	—	
1.3LS	3020	3360	
1.3GL	3268	3608	
1.6GL	3403	3743	
1.6GLS	3779	4119	D6/78
Ti	4125	—	
Avenger 1.3LS	3110	3450	D9/78
1.3GL	3558	3898	
1.3LS estate	3472	3812	
1.3GL estate	3943	4283	
1.6LS	3229	3569	
1.6GL	3678	4018	RTR405
1.6GLS	4025	4365	RTR339(a)
1.6LS estate	3591	3931	
1.6GL estate	4063	4403	

Horizon LS			
(1118cc)	3138	—	
LS (1294cc)	3281	—	
GL (1118cc)	3575	—	D5/79
GL (1294cc)	3717	—	
GLS (1294cc)	4073	—	
Hunter DL	3183	—	
Super	3573	3861	
180	4074	—	
2 litre	4789	5107	RTR308
Alpine LS			
(1294cc)	3655	—	
LS (1442cc)	3824	—	
GL (1294cc)	4036	—	R1151
GL (1442cc)	4281	—	RTR381
GLS (1442cc)	4897	—	RTR381
Matra Rancho	6057	—	

CITROEN (250 dealers)			
2CV6	2071	—	R1118
Dyane Weekend	2275	—	D1/79
G special	3210	—	
estate	3484	—	
Club	3543	3761	RTR384
Club estate	3783	4001	D8/79

Pallas	3934	4152	
CX2000 super	5581	—	RTR416
CX2400 Super	6223	6411	RTR416
Pallas	6835	7023	
GTi	7441	—	
Injection	—	7324	
Prestige			
Injection	10120	10308	
Safari	6389	6694	RTR416
S Familiale	6504	6809	
CX2500D	6460	—	
D Super	6748	—	
D Familiale	6861	—	

COLT (318 dealers)			
Lancer 1200			
Super	3149	—	
1400GL	3449	3774	RTR371
4dr	3599	—	
GLX 3dr			
hatchback	3649	—	
1400 estate	3749	—	
Celeste 1600ST	4049	—	
GS	4249	—	D5/78
2000GT	4549	—	
Sigma 1600GL	4249	4574	
2000GLX	4799	5124	RTR432
estate	5349	—	
Sapporo 2000	5949	6274	

DAIHATSU (70 dealers)			
F20 soft top	4645	—	
hard top	4795	—	
F50 soft top			
(diesel)	5109	—	
hard top			
(diesel)	5259	—	

DATSUN (370 dealers)			
Cherry L 3dr	2712	—	
GL	2855	—	
4dr saloon	2914	—	D3/78
5dr estate	3112	—	
3dr coupe	3280	—	
Sunny 1200GLS			
2dr	3015	—	
4dr	3114	—	
1400GLS	—	3457	
4dr	—	3548	
1200 estate	3300	—	
1400 coupe	3468	—	
Fastback			
estate	3663	—	
Violet 140J Mk3	3344	—	R1132M
160J Mk3	3407	3687	
SSS coupe	3805	—	
Bluebird 160B			
MkII	3586	—	
180B	3693	3973	
180B estate			
MkII	3974	—	RTR316
180B SSS			
MkII	4063	—	
Laurel 2litre MkII	4834	5153	D11/78
2litre MkII			
PAS	5052	5371	
Skyline 240K			
coupe	6464	6783	
280C saloon	6290	6609	
280C estate	6128	6447	
280ZX 2-seater	8218	8537	

IT HAD to be seen to be believed! Several brand-new Ford Fiestas had just arrived by ship at Weymouth, Dorset, from the factory in Spain, and were lined up ready for loading on to car transporters. What happened next, according to the AA member who watched, almost made his eyes pop out.

Waiting drivers jumped into the Fiestas, started them up . . . and began playing 'boy racers' round the compound.

It must be said that Ford acted immediately on the information when the member's report was passed on by the AA, last April. But, with past sightings of Jaguar XJSs being similarly joyridden at Felixstowe Docks, Suffolk—it was said that the squealing of tyres could be heard a quarter of a

Delivery pains and your new car

mile away—it is to be wondered how many other new cars get abused in some way before delivery to the buying public?

How many salesmen emulate the man in Bournemouth who often takes new, already-registered cars from the showroom for personal weekend use? To prevent awkward questions about mileage, he disconnects the speedometer cable.

Then there are the delivery drivers who drive new cars to the dealers, or from showroom to

showroom, when the numbers don't justify a transporter.

Recently, in DRIVE, a reader in Havant, Hants, wrote of the several occasions on which he had been overtaken at high speed by brand-new cars wearing trade-plates and their ex-works wax coating. We invited others to tell us of similar experiences, and the response—from as far afield as Cleveland, Co Durham, Brightlingsea, Essex, Runcorn, Cheshire, and Weston-super-Mare, Avon—

suggests that this kind of maltreatment is widespread.

A reader from Ripon, Yorks, quoted six cases, in March and April, when he was passed at speed by new cars in the process of being delivered, and listed locations, models and trade-plate details. All involved Fords, and DRIVE has handed the information to the manufacturer. One of the cars, the reader claimed, was doing 60–70mph, three were travelling at 70–80mph, and two in excess of 80mph—one of them 'pouring smoke from its exhaust'.

Ford's owners'-handbook advice, in common with that of other manufacturers, urges new-car owners to 'avoid consistent high speeds and severe brake applications', saying: 'Careful

PRICE-GUIDE

280ZX 2 + 2	9114	9433	
DE TOMASO (3 dealers)			
Pantera GTS	19794	—	
Longchamp	—	22882	
Deauville	—	25825	
FERRARI (15 dealers)			
Dino 308GT4	16107	—	
308GTB	17436	—	
308GTS	18277	—	
400GT	28457	28457	
512BB	30301	—	
FIAT (400 dealers)			
126	1933	—	
de Ville	2102	—	D1/79
127 900L 2dr	2536	—	RI137
1050L 3dr	2654	—	
1050C 3dr	2763	—	
1050CL 3dr	2870	—	RTR429
Sport	3193	—	
128 1300CL	3125	—	
estate	3241	—	
X1/9 1500	4907	—	
Mirafiori 1300L	3171	—	
4dr	3305	—	
1600 CL 4dr	3893	4178	
estate	4233	—	RTR412
Sport	4987	—	
Supermirafiori	—	—	
1600TC	4460	4745	D10/78(a)
132 2litre	5248	5568	D12/78
FORD (1240 dealers)			
Fiesta 950	2620	—	RTR417
950L	2912	—	
1100	2756	—	
1100L	3045	—	
1100S	3385	—	
1100 Ghia	3784	—	RI170
1300S	3561	—	
1300 Ghia	3921	—	
Escort 1100	—	—	
Popular	2621	—	RI136
1100 Popular	—	—	
Plus	2735	—	
1100 Popular	—	—	
Plus 4dr	2848	—	
1100L	2978	—	
1100L 4dr	3091	—	
1100 estate	2937	—	
1300 Popular	2707	—	
1300 Popular	—	—	
Plus	2835	—	D4/78
1300 Popular	—	—	
Plus 4dr	2948	—	
1300L	3063	3363	
1300L 4dr	3176	3476	
1300GL	3363	3663	
1300GL 4dr	3475	3775	
1300 Sport	3550	—	
1300 Ghia	3944	4249	
1300 Ghia	—	—	
4dr	4057	4362	
1300 estate	3084	—	
1300L estate	3405	—	
1300GL	—	—	
estate	3776	—	
1600 Sport	3651	—	
1600 Ghia	4159	4464	D4/79

Cortina 1300	3160	—	
1300 4dr	3282	—	
1300L	3373	—	RTR372
1300L 4dr	3494	—	
1600 4dr	3470	—	
1600L	3682	3987	RTR404
1600GL	4027	4332	
1600 Ghia	4769	5074	
1600 estate	3853	—	
1600L estate	4101	4406	
1600GL	—	—	
estate	4446	4751	
1600 Ghia	—	—	
estate	5187	5492	
2000GL	4252	4557	
2000S	4523	—	
2000 Ghia	4903	5208	
2000GL	—	—	
estate	4671	4976	
2000 Ghia	—	—	
estate	5322	5627	RTR413
2300GL	4800	5105	
2300S	5070	—	
2300 Ghia	5451	5756	
2300GL	—	—	
estate	5219	5524	
2300 Ghia	—	—	
estate	5870	6175	
Capri 1300L	3627	—	
1600L	3824	4129	
1600GL	4068	4373	RTR342
1600S	4642	—	
2000GL	4309	—	
2000S	4838	—	RI166
2000 Ghia	5623	5928	
3000S	5205	—	
3000 Ghia	—	6340	RI114
Granada 2000L	5087	5459	
2000L estate	5622	—	
2100 diesel	5473	—	
2300L	5382	5754	
2300GL	6545	6917	
2300L estate	5906	6278	
2800GL	—	6994	
2800i GLS	7651	8023	
2800 Ghia	—	8465	
2800i Ghia	8865	9237	
2800GL	—	7490	D8/78(a)
estate	—	—	
2800i GLS	8008	8380	
estate	—	—	
2800 Ghia	—	8853	D8/78
estate	—	—	
2800i Ghia	9178	9550	
estate	—	—	
FORD USA (14 dealers)			
Mercury	—	—	
Monarch Ghia	—	8858	
Monarch (lhd)	—	7858	
Mustang Ghia	—	—	
2.3 Turbo (lhd)	7408	—	
HONDA (246 dealers)			
Civic 1200 3dr	2895	3115	
1200 5dr	3085	3305	RI155
Accord 3dr	4040	4300	RTR420(a)
4dr	4240	4500	D4/79
Executive	—	5275	
Prelude	4875	5135	

JAGUAR ROVER TRIUMPH			
Jaguar (321 dealers)			
XJ6 3.4	11863	11863	RTR380
XJ6 4.2	13058	13058	
XJ12 5.3	—	15881	RTR305
XJS	17525	17525	RTR394
Daimler (277 dealers)			
Sovereign 4.2	13748	13748	
Double-Six	—	16588	
Vanden Plas 4.2	—	18184	
Double-Six	—	—	
Vanden Plas	—	21407	
Rover (950 dealers)			
2300	6115	6481	
2600	6915	7141	D8/78
3500	8116	8342	RTR428
Range Rover 3.5	10617	—	D2/79
Land-Rover (485 dealers)			
Land-Rover	4766	—	RTR333
diesel	5414	—	
lwb	5572	—	
lwb diesel	6220	—	
lwb 6-cylinder	5543	—	
Triumph (868 dealers)			
Spitfire	3665	—	RTR376
hardtop	3768	—	
Dolomite 1300	3576	—	
1500	3817	4187	
1500HL	4230	4600	
1850HL	4773	5143	
Sprint	5793	5924	RTR332
TR7	5111	5330	RTR401
MG (1856 dealers)			
Midget	3264	—	
MG Sports	4351	—	RTR243
MG GT	4949	—	
JEEP (70 dealers)			
CJ7 soft top	5314	—	
hard top	5704	—	
Renegade	—	—	
soft top	6764	—	
hard top	7114	—	
CJ7	—	—	
Golden Eagle	6764	—	
hard top	7114	—	
Cherokee 4dr	—	—	
(6-cyl)	8994	9094	
S (6-cyl)	—	9914	
S V8	—	10494	D2/79
Chief V8	—	10794	
Golden Eagle	—	—	
Chief	—	11114	
LADA (190 dealers)			
1200	2163	—	RI175
estate	2463	—	
1300ES	2530	—	D4/78
1500	—	—	
estate	2593	—	
1500ES	—	—	
estate	2978	—	
1600	2793	—	RI173
1600ES	3171	—	RI173
Niva	4098	—	
LANCIA (135 dealers)			
Beta 1300	3624	—	
1600	4328	—	
2000	4619	—	RI171
2000ES	5015	—	

Beta coupé			
1300	4313	—	
1600	4919	—	
2000	5317	—	
Beta Spyder			
2000	5780	—	
Beta HPE 1600			
2000	5998	—	
Gamma Berlina			
Gran Turismo	9246	—	
LOTUS (40 dealers)			
Elite 501	13583	13956	
502	14514	—	
503	15021	—	
504	—	15248	
Eclat 520	12093	—	
521	13030	13404	
522	13986	—	
523	14493	—	
524	—	14708	
Esprit	13239	—	
MASERATI (9 dealers)			
Merak SS	17287	—	
Kyalami	24268	—	
Khamsin	26618	—	
MAZDA (240 dealers)			
1000 hatchback	2815	—	
1300	—	—	
hatchback	3045	—	D4/78
1300 hatchback	—	—	
5dr	3195	—	RTR424
1.4 Special	—	—	
hatchback	3415	—	
1400 hatchback	—	—	
5dr	—	3515	
1400 estate	3415	—	D10/79
Montrose	—	—	
1600GL	3765	—	
1600GLS	4015	—	
2000GLS	4265	4565	
2000GLS	—	—	
coupe	4565	—	
MERCEDES-BENZ (96 dealers)			
200	7441	—	
200D	7608	—	
230	—	8514	
230C	—	10380	
240D	8530	9090	
240D lwb	—	13283	
250	—	9800	
250 lwb	—	13283	
300D	—	10563	
280E	—	11694	
280SE	—	13673	
280CE	—	12703	
350SE	—	15910	
350SL	—	15750	
450SE	—	17130	
450SEL	—	18090	
450SL	—	16831	
450SLC	—	19805	
450SEL 6.9	—	28716	
MORGAN (18 dealers)			
4/4 1600	4859	—	
4-str	5343	—	
Plus 8	7094	—	

driving during the first 1000 miles will pay dividends later in longer engine life and smoother mechanical functioning.'

The outcome of ignoring these recommendations? Says Les Sims, manager of AA technical services: 'At best, excessive oil consumption. At worst, premature component failure.'

'No matter how carefully parts are machined at the factory,' Sims continues, 'they look like the surface of the moon when viewed under a microscope. To give them a chance to bed-in properly, drivers must take things easy at the start. Belt a car from the word go, and it's like rubbing two pieces of sandpaper together: each wears the other away.'

Most new cars are moved by

transporter, though, on the evidence of that scene at Weymouth, this is no guarantee against pre-delivery wear and tear. Nonetheless, over a year, a large number of vehicles are driven individually to their destinations.

A Ford spokesman told DRIVE: 'Before you begin, you're going to tell me that the majority of cars spotted by your readers were ours. Well, that's inevitable, given our position in the market-place.' He's right. Almost four times as many Fords as any other make figured in DRIVE readers' letters.

Particularly worrying is the observation of a Weston-super-Mare police officer engaged in motorway-patrol duties in Avon and Somerset: 'It is not uncommon to see new cars being driven

flat out on trade-plates, and, when stopped, it is not unusual to find that the speedometer cable has been disconnected.' (This practice is legal only if the car is en route to the docks for export.)

In fact, says the Society of Motor Manufacturers and Traders, action is taken to prevent this. A spokesman explains: 'If we receive more than one report that a certain driver is disobeying instructions, we inform the appropriate manufacturer. There have been cases of men losing their livelihoods through this. And, once struck off, they find it virtually impossible to work again.'

The trouble is that many drivers are freelancers, paid according to the number of cars that they move. It follows that the faster

they can complete one delivery, the sooner they can get cracking on the next delivery.

As the letters from DRIVE readers suggest, it is difficult for motorists to recall accurately the details of offenders' trade-plates when travelling at speed. So those who indulge in motorway and trunk-road burn-ups are unlikely to be identified. A few that are caught also get off because, says the SMMT, inquiries have shown that they were driving 3litre models. 'These cars,' the spokesman explains, 'can be driven at around 70mph without harm because they're not exceeding 3500rpm.'

But, of course, not every car is a 3litre or more...

Vrrrooom: A Nelson, Lanes, reader reported seeing 'countless'

ON-THE-ROAD NEW-CAR PRICE-GUIDE

OPEL (230 dealers)			
Kadett Economy	2576	—	
DL	2797	—	
City DL 3dr	2861	—	
Special 2dr	3027	—	
Special 3dr	3126	—	
Special 4dr	3107	—	
Special estate			
3dr	3306	—	RTR338
coupe	3234	3533	
Ascona	3372	—	
4dr	3481	—	
DL 2dr	3764	4134	
DL 4dr	3872	4242	
2.0DL	4067	4437	
2.0 Berlina	4403	4773	
Manta 2.0			
Berlinetta			
hatchback	5082	5452	
coupe	4967	5337	
Rekord	4871	5265	
Berlina	5139	5533	D12/78
Berlina HL	5908	6302	
estate DL	5531	5925	
DL diesel	5791	6185	
estate DL			
diesel	6245	6639	
Senator	—	10086	
Monza coupe			
3dr	10361	10361	
PANTHER (35 dealers)			
J72 4.2	18110	18504	
de Ville 5.3			
saloon	—	50086	
convertible	—	60628	
Lima	7410	7807	
Lima Turbo	8113	—	
PEUGEOT (250 dealers)			
104GL	2774	—	RTR406
104ZL	2815	—	
104SL	3115	—	RTR406
104ZS	3264	—	RI146
104S	3519	—	
304GL estate	3340	—	
304SL estate	3594	—	
305GL	3495	—	D9/78
305GR	3785	—	D9/78
305SR	4124	—	RI162
504	4260	4776	RI174
504 estate	4729	—	
504 diesel	4890	—	RI125
504 diesel estate	5325	—	
504GL	4854	5370	RI140
504GL estate	5267	5783	RI159
504GL diesel	5555	—	RTR425(a)
504TI	5320	5836	RTR358
504 Family			
estate	5301	5817	
504 Family			
diesel estate	6002	—	
604SL	7444	7957	RTR391
604TI	8490	8852	RI167
POLSKI FIAT (125 dealers)			
125P	2245	—	RTR379
estate	2565	—	
Polonez	3115	—	
PONTIAC (5 dealers)			

Firebird	—	9311	
Trans-Am	—	9311	
PORSCHE (18 dealers)			
924	8679	9128	D7/78
924 Lux	9128	9578	
911SC (coupe or targa)	14679	—	
911SC Sport (coupe or targa)	16428	—	
928	20628	20628	
Turbo	26379	—	
RELIANT (260 dealers)			
Robin saloon	2158	—	RTR365
super saloon	2486	—	
estate	2325	—	
super estate	2591	—	
Kitten DL	2429	—	
DL estate	2599	—	
Scimitar GTE	7814	7952	RTR303
RENAULT (420 dealers)			
4	2338	—	RTR364
4TL	2524	—	RTR364
5	2447	—	
5TL	2742	—	D3/78
5GTL	2952	—	RI143
5TS	3289	—	RTR370
5 auto	—	3352	RI172
5 Gordini	4251	—	
6TL	3036	—	RTR364
12	2941	—	RTR385
12TL	3257	—	RTR385
estate	3633	—	RTR374
14TL	3173	—	RTR414
14GTL	3246	—	
15GTL	4085	—	D5/78
16TL	3903	4228	RTR291
16TX	4731	5058	RTR359
17TS	5051	—	
18TL	3425	—	
18TS	3717	4068	
18GTL	3927	—	
18GTS	4345	4615	
20TL	4601	4966	RTR409
20TS	5496	5861	D12/78
30TS	6602	6967	RI134
30TX	7830	8076	
ROLLS-ROYCE (70 dealers)			
Silver Shadow II	—	32173	RTR312
Silver Wraith II	—	37871	
Corniche	—	46728	
Convertible	—	49629	
Camargue	—	56907	
SAAB (188 dealers)			
99L 2dr	4802	—	
99GL 4dr	5227	5677	RTR419
900GL 3dr	5872	—	
900GLS 3dr	6122	6622	
5dr	6377	6947	
900EMS 3dr	7402	—	
900GLE 5dr	—	8102	
Turbo 3dr	9122	—	
Turbo 5dr	9482	—	
SIMCA (650 dealers)			
1005GLS	—	2268	—
Special	2268	—	

1006GLS	—	—	
Special	2363	—	RTR357
1100LE 3dr	2451	—	
1100LE 5dr	2522	—	RTR298
1100GLS estate	2929	—	
Special	2887	—	
SKODA (275 dealers)			
S110R coupe	2120	—	
105S	1970	—	
105L	2069	—	D1/79
120L	2170	—	
120LS	2419	—	RI169
SPARTAN (0 dealers)			
Sports 2-str	4010	—	
2 + 2	4310	—	
SUBARU (65 dealers)			
1600DL 2dr	2963	—	
4dr	3092	3466	D6/78
Custom 4dr	3419	—	
GL coupe	3115	—	
GFT	3618	—	
DL estate	3454	—	
4wd estate	4420	—	D2/79
SUZUKI (18 dealers)			
LJ80 4wd	3010	—	
LJ80V 4wd	3460	—	
TOYOTA (232 dealers)			
Starlet GL 3dr	—	—	
(1000cc)	2978	—	D3/79
GL 5dr	3070	—	D3/79
GL 3dr	—	—	
(1200cc)	3194	—	
GL 5dr	3290	—	
Corolla	—	—	
30-1200DL 2dr	2946	—	
1200DL 4dr	3058	3251	RTR399
estate	3309	—	
1600 Liftback	3670	—	
Carina 1600 DL	3727	4002	D10/78(a)
estate	4010	—	
Celica 1600ST	—	—	
coupe	4189	—	
2000ST	—	—	
Liftback	4555	—	RTR423
2000XT	—	—	
Liftback	5250	5435	
2000GT	—	—	
Liftback	5537	—	
Cressida	—	—	
2000DL	4382	4675	
estate	4713	5009	
Corona GL	5068	5256	
Crown 2600	—	—	
Super	—	7624	
TVR (28 dealers)			
3000M	7368	—	
convertible	7715	—	
Taimar	8010	—	D7/78
Turbo	11045	—	
convertible	11569	—	
Taimar Turbo	11836	—	
VAUXHALL (650 dealers)			
Chevette E	2741	—	
E 3dr	2784	—	
E 4dr	2856	—	

L 2dr	3003	—	
L 3dr	3046	—	
L 4dr	3118	—	RTR396
L estate	3401	—	
GL 3dr	3383	—	D3/79
GL 4dr	3455	—	
2300HS 3dr	5712	—	
Viva E	2832	—	RTR378
E 4dr	2947	—	
1300L 2dr	3094	—	
L 4dr	3209	—	
L estate 3dr	3441	—	
1300GLS 2dr	3499	—	
1300GLS	—	—	
estate 3dr	3846	—	
GLS 4dr	3614	—	
1800GLS 4dr	3802	4117	
Cavalier 1300L	3457	—	D9/78
1300L 4dr	3572	—	D9/78
1600L 2dr	3645	4037	
1600L 4dr	3760	4152	RTR382
GL 4dr	4118	4510	
GLS Sports	—	—	
hatch	4783	5175	
2000GL 4dr	4339	4731	
2000GLS	5004	5396	
GLS coupe	4961	5353	
Carlton 2000	5258	5679	D12/78
estate 5dr	5777	6194	
Royale	8990	8990	
coupe	9316	9316	
VOLKSWAGEN (340 dealers)			
Polo N900 3dr	2790	—	RTR408
L 900 3dr	3080	—	RTR408
GLS1100 3dr	3445	—	RTR408
Derby	—	—	
LS1100 2dr	2930	—	
LS1100 2dr	3270	—	D3/79
GLS1300 2dr	3585	—	RI168
Golf N1100 3dr	3080	—	
L1100 5dr	3520	—	RTR411
LD (diesel)	—	—	
1500 5dr	4210	—	RI160
GL1100 3dr	3645	—	
GLS1460 5dr	4050	4317	D6/78
GTI1600 3dr	4820	—	
Passat LS1600	—	—	
5dr	4525	4818	RTR388
GLS1600 5dr	4840	5133	RI165
LS estate	4665	4958	
GLS estate	5110	5403	
Scirocco	—	—	
GLS1600	—	—	
coupe	5110	5443	D7/79
VOLVO (239 dealers)			
343DL	3668	3818	D10/78(a)
244DL	5410	6145	RTR426
244GL + o/d	6594	6909	RTR426
244GLE	7161	7476	
245DL estate	6028	6448	RTR368
245GLE estate	7165	7481	
264GL	7774	8089	RTR395
264GLE	8636	8951	
265GL estate	7913	8228	
265GLE estate	8413	8728	
262C coupe	12824	13125	
264TE	—	—	
Limousine	—	17273	

new makes and models being abused on delivery runs, particularly on the M62. 'One instance was a Ford Cortina Mk4, still in wax and with numbers scribbled on the windows, being driven at full bore in the fast lane. It must have been well above the legal speed limit . . . Ten miles farther down the motorway, I spotted it again—on the hard shoulder, its hazard-warning lights flashing, its bonnet up, obviously boiling.'

Vrrrooom: 'I travel on the A505 road to Hitchin daily, and am often overtaken by new Vauxhall vans and trucks in excess of 70mph' (Luton, Beds, reader).

Vrrrooom: 'I was doing 70mph, yet I was passed by three Fiestas when driving south on the A1 in south Yorkshire. I later discussed the matter with a friend who owns

a substantial repair garage. His comment—"It's happening all the time up and down the country"' (Brightlingsea, Essex, reader).

Vrrrooom: 'The new-car dealer next door maltreats obviously cold engines by revving up until the engines are screaming and smoke is pouring from the back. This is most noticeable when models are driven the short distance to the garage from the transporter that has just delivered them' (Windsor, Berks, reader).

Vrrrooom: 'I was travelling north on the M5 at 65-70mph, and was passed by a couple of new Fiestas with trade-plates. I tried to log their speed by keeping up with them, but at 80mph they were still pulling away from me' (Barry, S Wales, reader).

Vrrrooom: 'I have just seen a

new Ford Escort Popular with trade-plates doing well over 70 mph, and this is no isolated incident on the A38 Exeter-Plymouth road' (Bristol reader).

Vrrrooom: 'If you want evidence, clock the Fords on the A19 between Crathorne and Osmotherley, Co Durham. I would hate to buy any of these, the way they're delivered' (Cleveland, Co Durham, reader).

Vrrrooom: 'Not only British cars are subjected to this treatment. I have seen Fiats, on the quayside at Ellesmere Port, being loaded on to transporters after being driven at high speeds across the potholed carpark with cold engines. It would seem to be a waste of time running-in any new car, as it's almost certain that damage has already been done. I've even seen

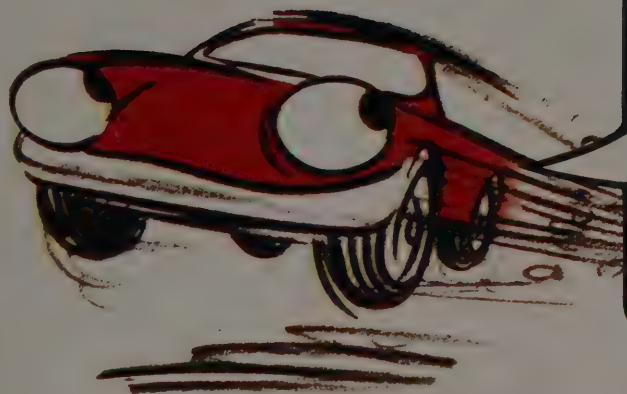
a Rolls maltreated' (Runcorn, Cheshire, reader).

Says the SMMT: 'Depending on the make and model, cars of 2litres or less should not exceed 50-60mph while being delivered.' Nor, for that matter, should new cars be raced around dockyards, or taken out of showrooms for weekend pleasure jaunts.

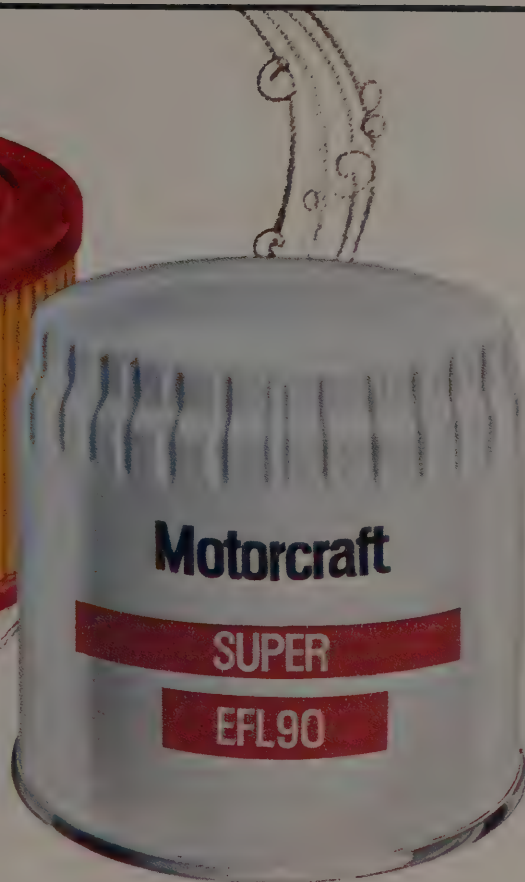
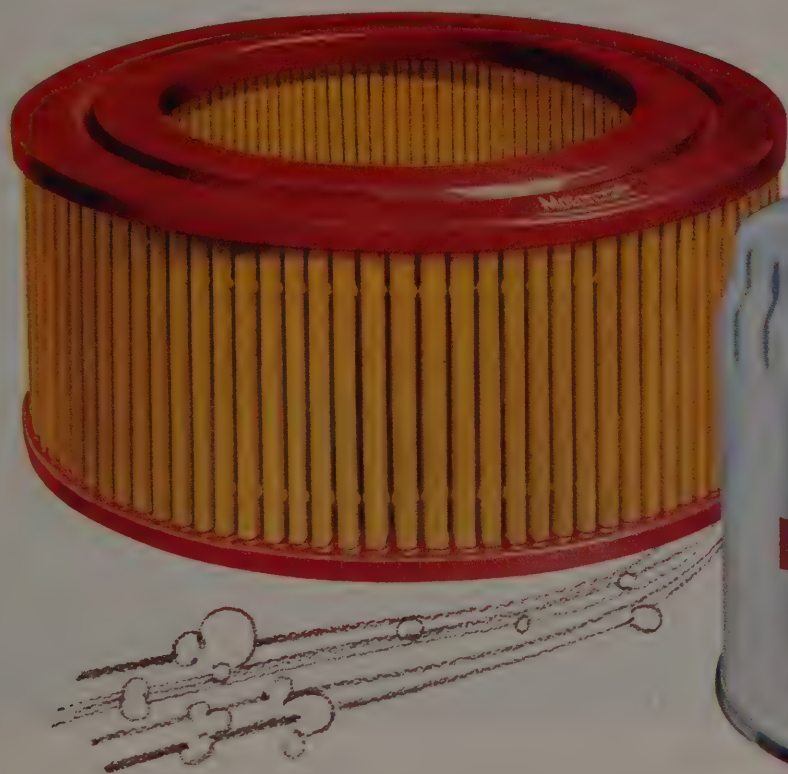
DRIVE would like to see these disturbing practices ended. But it is no use pretending that it will happen overnight: it will take many complaints, recording dates, locations, speeds, makes and models concerned, colour and litre ratings and, most important, details of drivers' trade plates.

Thanks for your letters. You can be sure we'll pass them on to manufacturers to start the ball rolling.

ROY JOHNSTONE



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FOR AIR AND HAD
TIRED BLOOD TILL
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To fit most cars,
including imports.



BACKED BY FORD



summer weekends—the AA has drawn up a 'six-point plan' for drivers to make the gallons go farther:

- accelerate gently and smoothly through the gears
- use the highest gear possible (but do not labour the engine), and cruise between 40–50mph whenever possible
- anticipate road conditions to avoid the necessity for sharp braking or acceleration
- ensure correct tyre pressures
- operate the choke only when absolutely necessary and for the minimum possible time
- and turn off the engine while stationary in traffic jams.

● *Petrol misers will find lots of fuel for thought in the next two issues of DRIVE, both of which will be packed with energy-saving ideas and advice.*

Ambulance without wheels

A high-speed motorway smash. And, amid the twisted steel and tangled wreckage, two people lie critically injured. Every minute that passes lessens their chances of survival.

In such a remote spot, both probably would have died waiting for an ambulance to arrive, or on their way in one to hospital. But look again at our picture, above: the ambulance for these victims has already arrived—the yellow one, on the left, with the rotor blades and no wheels.

The specially equipped helicopter covered 17 miles in eight minutes to bring a doctor to the scene. And that's the most important thing of all—more important even than getting the casualties to hospital in less than 10 minutes once they've

been stretchered and put aboard. For the sooner that resuscitation can be administered, the quicker a patient can be prepared for subsequent specialist treatment of his injuries. Early care can prevent all kinds of complications.

There's just one disappointment: the picture was taken in W Germany, *not* Gt Britain. Although military helicopters are occasionally called out to road accidents in this country, it's very much the exception. Moreover, the army's choppers, unlike those used in Germany, are not specifically designed for transporting road-accident victims.

Today, there are 24 hospital-based rescue-helicopter stations in Germany. The establishment of two more, next year, will put practically every part of the country in

reach of the air-rescue service. Cost-benefit analyses show that each helicopter need save only two lives a year to prove economic.

In fact, the service is doing much better than this. In 10–15% of cases, on doctors' estimates, the helicopters (which supplement ground-rescue services) either save a life or play a crucial role in preventing permanent disablement, or reduce a patient's stay in hospital. They fly 12,500 missions annually, half of them to road accidents.

In Britain, as DRIVE reported two years ago, immediate-care schemes are provided by a handful of hospital emergency squads and specially trained ambulance crews, and on a voluntary basis by some GPs. Although GP schemes are growing, large areas of the UK still remain uncovered.



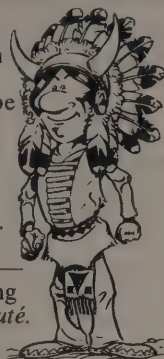
reason, I can only think that irresponsibly discarded cigarettes from passing drivers are the source of the trouble.'

Normally, the fires are dealt with by the operators of spraying machinery, who undergo special safety training. But sometimes, in the panic of the moment, the lever that shuts off the spray is forgotten. The other worry is the 'cow-boy' operator, whose maintenance and training standards may be questionable.

Now see 'It's not the cough', page 10.

Red alert

Traffic congestion on French roads this summer will be a nuisance to tens of thousands—perhaps you, as you drive to a holiday in the sun. So do yourself—and everyone else—a favour by looking out for the *bison futé*.



The 'clever Indian' is France's cartoon-character symbol on traffic-information maps and at centres throughout France during the holiday months, and, by calling at his sign (or, of course, asking the AA to put you on to him in advance of your holiday), you can obtain the latest information on traffic build-ups—and, better still, less-trafficked routes across France.

In general, heavy-traffic days to avoid are 29, 30 June; 1, 13, 14, 26, 27, 28, 29 July; 1, 2, 4, 23, 24, 25, 31 August; and 1 September.

Roads information

Numbers in parentheses refer to maps in the 1978-1979 edition of the AA Members' Handbook.

BRITAIN

Motorways open A1(M) South Mimms—Hatfield, 3.2 miles (19).

Major roads open March bypass A141, 2.6 miles (28); Newbury-Sandleford link A34, 1 mile (9); Bury St Edmunds—Woolpit dualling, 3.7 miles (20).

OVERSEAS

Denmark Lower speed limits are: motorways from 110kph to 100kph (62mph); major roads from 90kph to 80kph (50mph); secondary roads and built-up areas remain at 60kph (37mph). Fines for exceeding limits revised: minimum on-the-spot fine increased to DKr 600; rising scale between DKr 600 and DKr 2000 for breaking limits by 20-50kph.

France Autoroute A61 Two sections of toll motorway now open to traffic between Toulouse and Narbonne: 26km between Toulouse and Villefranche-de-Lauragais, and 48km between Carcassonne and Narbonne.

Yugoslavia Belgrade-Niš. E5: road works in progress; 114km section Belgrade-Batočina toll motorway now open; tolls—cars up to 1300cc D45, all cars over—D60. Toll for Zagreb-Karlovac E96 motorway increased to D20 for cars up to 1700cc, D25 for those over.

Would you belt up?

The first man in Britain to refuse to wear a seatbelt was certainly taught a lesson: he fell 200ft out of an aircraft over the Hampshire countryside, and didn't live to mend his ways.

The legendary Colonel Samuel Franklyn Cody had always insisted that he would never be strapped in, just in case he needed to make a swift exit from his stunt plane. Sixty-five years later, the argument has a familiar ring, being used with monotonous regularity by opponents of belting-up in cars by law.

Until the General Election intervened, it looked at last as if Britain would adopt legislation: the Bill had survived its Second Reading in the Commons and seemed to be on course for the statute book. But one of the first acts of the incoming government was to drop the proposals—a sad setback, particularly in view of a DRIVE survey that suggests many drivers are simply *not* going to wear seatbelts without legislation.

DRIVE's poll of nearly 1000 motorists nationwide found that one in four still refuses to wear a seatbelt—usually clinging to the same mistaken belief as Mr Cody.

The survey indicates that, despite expensive publicity campaigns (and who can forget Jimmy Savile's clunk-clickings?), the number of drivers who belt-up has risen by only 6% since DRIVE last took a poll, in 1974. Despite four attempts in that time to make front-seatbelt-wearing compulsory, only 29 drivers in every 100 always use them although a further 15% nearly always belt up.

A hopeful note, however, is that twice the proportion of under-34s, compared to over-65s, are seat-belters. Gentle persuasion seems also to have been more effective in the white-collar group, with 36% always wearing belts, compared with only 20% of blue-collar workers. In this group, one in three claims never to wear a belt, and, significantly, most insist that only legislation would make them.

Nearly half of DRIVE's 1000 had, at some time or another, been involved in a road accident; fewer than a quarter of these were wearing a seatbelt at the time, but most now agree that they would have a better chance of escaping serious injury if they were to wear a belt.

Only 4% thought that they stood a greater chance of being injured if they were belted up, hoping for a quick getaway in fire or water crashes... and they stuck to their view in spite of the fact that fewer than one in every 100 serious accidents involve fire or water. Some of this minority also argue that the chances of survival are better in an accident if a car's occupants are thrown clear. Not so, says the government's Trans-

port and Road Research Laboratory: falling out of a car in an accident could at least double the risk of being killed.

Now that the Republic of Ireland has joined the international 'seatbelts club'—they became compulsory for front-seat occupants at the beginning of February—the UK and Italy are the only EEC countries that still allow motorists to drive without them. Belts are also compulsory in Spain, Portugal, Norway, Austria, Sweden, Finland, Hungary, Czechoslovakia, the USSR, Israel, Australia, New Zealand, South Africa and in some parts of Canada.

How effective has legislation been in these countries?

The latest official reports (and there have been at least a dozen since the early 1970s) show that, in many cases, it has trebled the number of motorists wearing seatbelts, and reduced the number of road deaths by 40% and serious injuries by 60%. If these ratios held in Britain, more than 600 deaths and nearly 13,000 serious injuries could be avoided annually.

Yet according to DRIVE's survey, the proportion of motorists convinced of the need for compulsory seatbelt legislation remains almost exactly the same, as in 1974—roughly half. Nevertheless, nearly 60% are firmly in favour of a law banning children from front seats (though this sensible provision was not in fact included in the latest seatbelt-legislation proposals).

Asked if they thought that car manufacturers should be compelled by law to fit rear seatbelts in cars, just under half of those questioned were in favour... but a massive 83% agreed that parents who do not insist on their children wearing a safety harness are exposing them to unnecessary risk.

Parents' concern over their children's safety has also been reflected in the response to the Automotive Child Safety Bureau, founded in October last year by seatbelt-maker Kangol, to give guidance on all child restraints. In its first six months, it dealt with more than 250 enquiries—mainly from mothers.

With more than 1500 passengers under 15 years old killed or seriously hurt in 1977, there is an obvious need to impress on parents that children should always be strapped in. Yet, even when parents preach safety for children, they don't always practise it themselves: DRIVE's survey shows that 15% of motorists who advocate compulsory restraints for children do not want them, in the form of seatbelts, for adults.

And, while the controversy rages, it is easy to forget that, unlike luckless Sam Cody, airline passengers have *had* to belt up for nearly 20 years.

ROLAND WEISZ

It's not the cough that

A leading French doctor has called for a ban on smoking behind the wheel. To support his argument, he claims proof that in France, last year alone, 650 people were killed and a further 17,000 injured *as a direct result of smoking in cars*. Scary? Maybe—but, if he's right, he could have a strong chance of getting his way: already, the anti-smoking lobby in France has claimed successes in public buildings, cinemas and some forms of transport, and the French ministry of health is expected to give him strong support. If that happens, and dedicated Europeans pick up the theme, could it be only a matter of time before UK motorists begin appearing in court, charged with 'smoking whilst conducting a motor vehicle upon the public highway'? MIKE HILL—a non-smoker—goes looking for the fire

SMOKING IS AN emotive issue, and tubs get thumped with equal vehemence in pro and anti camps. But emotion, like smoke, tends to obscure the arguments.

The 'anti-'camp is very quick to produce comment, facts, reports and research to support its views, but there is a curious reluctance to fight back within the tobacco industry—in fact, all the big

cigarette-producing companies admit to a voluntary ban on combating their opponents. Battle-weary after recent skirmishes over advertising, sponsorship, and cancer, they now roll over with their legs in the air immediately any challenge comes along, safe, presumably, in the knowledge that, whatever anyone says, a large number of people are still going to

stuff paper and leaves into their mouths and set light to them.

'It's distracting, you'll cause an accident'
Dr Jean de Kearney, the French medic who's calling for an all-out ban on smoking while driving, makes a strong point about driver-vigilance during the act of lighting up: 'Every driver who smokes is a bad driver. His vigilance relaxes from the moment he reaches for a cigarette or pipe.'

'But,' says Brian Roach, of Carreras-Rothmans, 'lighting up and smoking is no more or less distracting than unwrapping and eating sweets, trying to read the map or watching girls. No motorist should do anything dangerous . . . but I've even seen people shaving while driving!'

'It's nasty for non-smokers in the car' It's



carries you off, it's...

true that non-smokers do find the contents of other people's lungs abhorrent. However, no one is prepared to say that, at normal levels of smoke or carbon monoxide caused by smoking in a car, it's harmful—except, possibly to babies.

'Babies and young children exposed to smoky atmospheres will suffer long-term effects, mainly through increased susceptibility to chest diseases in later life,' says Dr M A Russell, who heads the addiction-research unit at London's Maudesley Hospital.

'Cigarette smoking must remain a personal choice,' declares Carreras-

'Nicotine can damage optic nerves'

Rothman spokesman Brian Roach. 'But it's wrong to inconvenience others. Smokers should be considerate . . . but then so should people who eat garlic, drink gin and tonic, use motor mowers or roar about on motorcycles . . .'

'Smoking keeps me alert!' Tricky one, this. Smoking can stimulate the brain—and it can act as a tranquilliser. Dr de Kearney, however, is adamant that smoking is a depressant. 'Smokers are more alert for a moment, then the desire to doze off increases.'

ASH—the Action on Smoking and Health lobby—finds plenty of evidence to back him up. A W German report, shown to DRIVE, holds that toxic substances in cigarettes can impair driving performance. *Nicotine can damage the optic nerves, and 10 cigarettes can render a driver wholly incapable of taking quick action,* concludes the study.

Equally it isn't difficult to 'prove' the reverse. The Tobacco Advisory Council (which is prepared to join the smoking lobby) also has a report that monitors the effects of smoking on human attention. It concludes: *The general findings were that smokers performed tasks more efficiently in experimental situations with cigarettes than without. Smokers maintained a constantly superior level of stimulus selection compared to non-smoking control groups.'*

The answer is that . . . it all depends. 'Nicotine acts two ways,' says Andy Young, of Imperial Tobacco. 'It depends on the mood of the driver. If he's very keyed-up or stressed and needs calming, then a cigarette will probably steady him. If he needs to think or work at a concentrated level, then a cigarette will stimulate his concentration.'

'It'll make you go blind' Much has been written about the effects on driver ability of carbon monoxide. Carbon monoxide is a killer—that's why exhaust fumes are

lethal in confined spaces—and cigarette smoking does release CO. At sub-lethal levels, CO limits capacity of the blood to carry oxygen to the brain.

'The effect of smoking in a car is to reduce reaction-capability as a result of higher concentrations of CO,' says another W German study; while Dutch scientists blame the poison as the principal cause of cardiac, brain and lung diseases behind the wheel.

'Rubbish!' say the pro-smokers, who claim that most of the so-called conclusive tests are carried out in totally artificial conditions. Tony St Aubyn, of the Tobacco Advisory Council, goes so far as to call the test conditions 'lunatic', and cites a paper produced in the States by the tobacco-funded Philip Morris Research Centre that shows it is rarely possible to build up the concentrations of CO to a threshold level at which CO even begins to have an effect.

This report cites an experiment in which 21 people were crowded into a totally sealed, 15ft-by-2ft-by-8ft chamber, and told to smoke 80 cigarettes and two cigars between them in 78 minutes. The worst rate of CO-absorption in this test was 2.6% COHb—that's the toxic stuff in the blood stream—against a World Health Organisation-suggested 4% COHb, the maximum toxicity before CO has an adverse effect. To reach this level, the human 'chimneys' would have to remain in their sealed chamber, still smoking, for at least another 78 minutes.

It's easy to agree with Philip Morris, even if it does have a vested interest, that this isn't a real-life situation . . .

'Haven't other countries banned it?' Yes, and no—mostly, no. In W Germany, drivers of public-service vehicles—buses, and so on, that carry passengers—are

'Ban smoking on motorways'

banned from smoking at the wheel. Berndt Splitter, of the ADAC—the AA equivalent in W Germany—says that the ban is imposed because of the 'lessening of reaction and attentiveness and the subsequent risk to a large number of passengers in the case of an accident'.

Another German traffic expert has called for an extension to the ban to all drivers in traffic conditions 'where the driver needs increased attentiveness, such as on m-ways and in heavy city traffic'.

Dr de Kearney claims that vision can be impaired by a fifth after four cigarettes. However, there may be more danger attached to preventing smoking.

Dr M A Russell, of the Maudesley Hospital addiction-research team, says:

'Drivers made to abstain from smoking make many more mistakes in reaction and vigilance tests, and are liable to be more irritable and aggressive. The deprived smoker is also more likely to nod-off on a long, boring journey'.

'It's another job the police can do without' Now suppose, just suppose, that the inconclusive evidence against smoking-while-driving could be made conclusive. And just suppose that de Kearney got his way, and had smoking banned behind the wheel: that would mean legislation to enforce a ban and, presumably, penalties and charges—even endorsements. All of which would fall very heavily upon the already-overstretched police.

'The idea is rubbish,' declares New Scotland Yard spokesperson Linda Bell, vehemently. Then, more circumspectly: 'Any proposal of this type that would create an additional burden in traffic legislation would be highly unwelcome.'

In other words, the police have a hard-enough job to keep up with real

'Your health . . . your affair'

offenders, without worrying about the gasper who wants to damage his lungs.

'Whose life is it anyway?' Many people who hold strong views pro- and anti-smoking are united on one thing: if you want to ruin your health, then that's your affair; to deny that undermines personal freedom. If you ban smoking, why not ban rock climbing or football spectating, any of which can damage your health?

'Smoking must remain a personal choice for the individual,' says Carreras-Rothmans' Brian Roach. 'People should have the right to decide when they smoke.'

'Either way, it will cost you' Smoking is a costly pastime—but there's also a cost penalty in banning it. To introduce and enforce legislation, with all the bureaucracy and additional burden on police and courts, would be incalculably expensive.

Well, would you do it in a car? Smoke them or ban them, one thing's for sure: logic alone is unlikely to solve the cigarette question, and even factoids and figures such as Dr de Kearney's seem only to add fuel to the fire. No, the answer lies in sheer force of numbers—and, at the moment, four out of every 10 people use tobacco.

Here's your chance to influence a few more to your side of the argument: write to Smoke'n'DRIVE, Fanum House, Basingstoke, Hants RG21 2EA. We'll print the best, add up the rest and let you know the final score.

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'Sounds like business is about to pick up.'

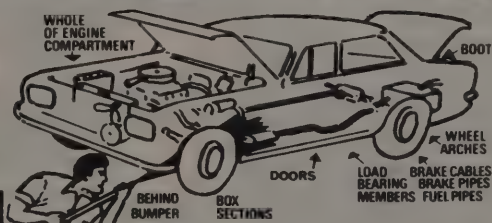
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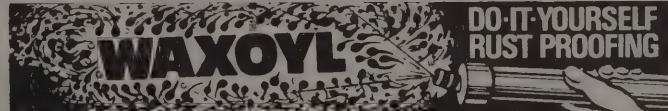
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WORLD-WIDE 4wd=\$\$\$\$

THE BOOM in four-wheel-drive, Jeep-style vehicles has saved the day for **American Motors**, the comparatively small US manufacturer whose best-known car is—the Jeep. AMC knows a good thing when it sees it, and is now developing a range of four-wheel-drive cars. They could go on sale late this year or early in 1980 to further aid AMC's recovery.

The 'merging' mood in the European car industry is making some unlikely bedfellows. The latest twosome to get together are **Saab** and **Fiat's Lancia** subsidiary. Not for any kind of commercial advantage, however, but to exchange technical information and to share some components in an effort to keep costs down. The latest Lancias already benefit from Saab expertise in areas such as headlamp wash-wipe; look for

more extensive Ital-Swedish co-operation on future models. The Swedes could certainly benefit from Italianate styling, and the Italians from Scandinavian skill in making cars rugged.

The time is drawing near when Skoda will launch the **front-wheel-drive Estelle**, the model it wanted to introduce originally when the old-style Skoda bodyshell was scrapped. Funds didn't then run to a mechanical re-vamp and complete restyling, so the Estelle emerged still saddled with Skoda's rear-engine, and a swing-axle suspension package that caused oversteer and instability in side-winds. With help from the AA, Skoda's British importers made some improvements, but the real change is soon to come.

Toyo Kogyo, the company that makes **Mazda** cars, has picked up a Ford order for front-wheel-drive transmissions. It's for a new small car that Ford US will launch in 1981. Mazda will use the same gearbox and final-drive assembly in a new car of its own, but that—unlike the Ford—is likely to have a Wankel rotary engine.

Everyone has an 'if-only-I'd-kept-it' story about some classic car that's now appreciating like mad. But there'll be few to top the one about the appreciation rate of the

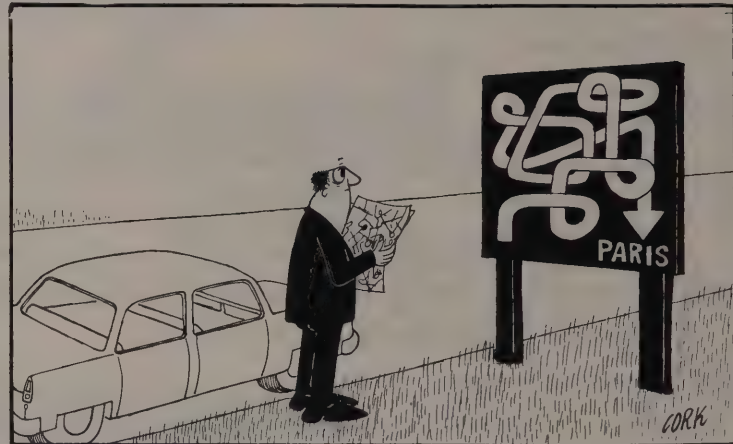
Ferrari 250GTO. A GT coupé built for racing in the early 1960s, it has acquired blue-chip status among collectors quicker than any other classic. In 1963 you could have picked one up for anything between £1500 and £3000. Less than two years ago you could have cashed your investment for a tax-free £45,000 . . . but you'd have been sorry. A Continental collector has recently paid £75,000 to obtain one of the 50-odd GTOs still in existence.

Exiting quietly, stage left, goes Ford's project to develop the Stirling engine as a possible **replacement for piston power**. The Stirling, invented in the last century in Scotland, has a captive

piston that moves back and forth in a cylinder as the gas above and below it is alternately heated and cooled, the advantage being that exhaust fumes are kept clean. The snag is efficient mass production.

In Japan, where politeness is a way of life, police can now avoid the mutual embarrassment of issuing speeding tickets. A special **camera** can record the offender's car, his registration number and even the driver's face, while also showing the mph reading.

One of Lagonda's gimmicks—**digital read-out instruments**—will soon be unique no longer: Ford plans to fit it on some up-market US models later this year.



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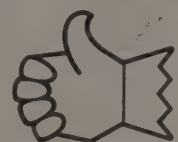
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used cars

CAR TESTS

In the exclusive club of 10 mid-engined sports cars available today, at up to £30,000, Fiat's baby is the cheapest...

Fiat X1/9 1500

Price £4757 On the road £4907

The standard recipe for a small sports car—and Britain makes more of them than anyone—is to take a dated, often-outmoded engine, bolt on twin carburettors and drop the lump into a low body, usually with a draughty rag-top.

Are we being too unkind? Well, anyone who compares the nuts'n'-bolts details of MGs and Triumphs with Fiat's X1/9 might not think so. From its mid-engine to its targa top, it is the first radically new thing in this market for years!

It has to be said, though, that, at heart, even this upstart didn't get it right immediately. At its 1977 UK debut, it contained a 1300cc version of Fiat's 128 overhead-cam engine. DRIVE never put this car through a full road test, but even cursory acquaintance left us in agreement with critics who said it was under-powered.

Fiat answered the complaints last year, with the launch of the X1/9 1500, powered by a longer-stroke, 85bhp version of the original unit.

It was ready for our boy-racers to test...

How it goes

Our problems started early, usually first thing in the morning! The automatic choke was supposed to ensure prompt, trouble-free cold starts and warm-ups, but that, alas, was not the case. Despite religiously following the handbook's instructions, we had to suffer frequent stalls until the thankfully short warm-up period was complete.

Once past these early-morning tantrums, however, the X1/9 went on to produce exhilarating acceleration times that only its larger-engined rivals could start to match. It leapt from 0-60mph in just over 10sec, and carried on pulling enthusiastically to a maximum of 108mph. Top-gear acceleration times are impressive, too. For the Fiat to give of its best, one mustn't be shy of taking it all the way up to the permitted 6900rpm limit. In fact, we think that a rev-limiter would be a good idea, for there are absolutely no signs of complaint should the eager little engine be over-revved.

Undoubtedly, the biggest short-coming for enthusiastic drivers is the quality of the gear change—it was nothing short of dreadful on our car and seriously inhibited performance at times. Spongy and unco-operative, it wasn't helped by a rubbery and awkwardly shaped gearknob. It's a great pity, because the ratios are well chosen, allowing a sensible maximum in

each gear that cries out for full and frequent exploitation.

The handling, however, brought hardly a murmur of complaint from DRIVE's testers. After recent experiences in an Alfased Sprint and now the X1/9, we are sure the Italians must know something about handling that they are keeping a state secret. Fluid and flattering, the X1/9 darts round corners at *ridiculous* speeds, almost as though it's travelling on rails; the steering is light and informative; and, should the tail start to come round, a flick of opposite lock is all that is necessary to restore composure. The murmur? Well, at high speeds, particularly in a crosswind, straight-ahead stability is not as reassuring as we would like.

The driving position is more suited to British limbs than in most Italian cars, although long sportsmen could find a problem with legroom. The pedal pads are small—even uncomfortable if one wears thin-soled shoes—and we found that, in common with many sports cars, the heels and sides of drivers' shoes wear quickly because of the angle of attack on the pedals.

The small leather-bound steering wheel is well positioned, and the trio of column stalks are within easy finger-tip reach. There's a comprehensive instrument pack,

HOW GOOD

At-a-glance

DRIVE's verdict on the Fiat X1/9 1500, taking into consideration its rivals, its price and what kind of car it's *meant* to be.

Out of five

PERFORMANCE

●●●●

FUEL ECONOMY

●●●●●

HANDLING/STEERING

●●●●●

COMFORT/REFINEMENT

●●●

INTERIOR SPACE

●

PASSENGER AIDS

●●●

DRIVER AIDS

●●

ACCIDENT/INJURY SAFEGUARDS

●●●

RUST RESISTANCE

●●

RUNNING RELIABILITY

●●●

but some of the minor gauges and warning lamps are masked from view by the wheel rim, and the minor-control switchgear on the centre console seems fussy.

Rear-three-quarter vision is marred by thick rear-screen pillars, and the wipers leave large unswept areas on the windscreen for British drivers to peer around; nor was the fastest wiper speed quick enough to contend with some heavy spring-time downpours. We would also like more-powerful headlamps and, more importantly, ones that stayed up: one of our car's pop-up eyes had the dangerous habit of popping down, plunging us into gloom.

How comfortable

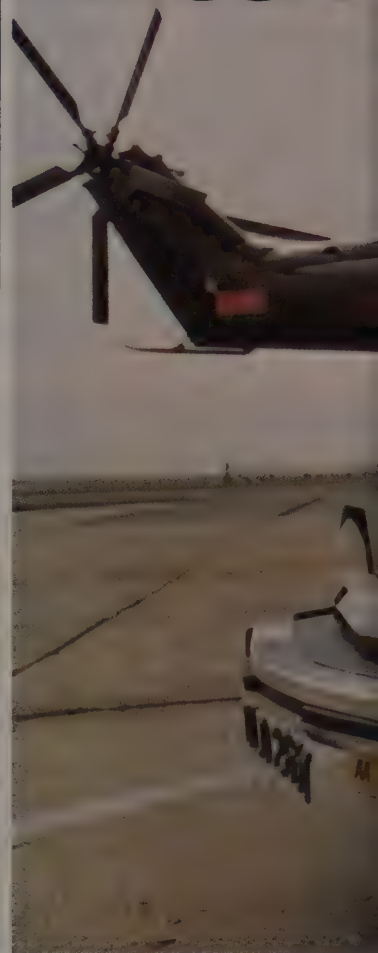
For a small sports car with such nimble handling and high standards of roadholding, Fiat must be congratulated on the ride comfort of the X1/9. One is rarely in doubt as to the nature of the road surface, but is seldom offended by it. Lateral ridges can occasionally feed a mild jolt through to the interior, but this is never allowed to interfere with cornering stability. The 5½in ground clearance is good for a sports car, but rough-country racers should beware of sharp, deep dips—they can cause the chin spoiler to ground.

The X1/9, like Triumph's TR7, is a two-seater that makes no concessions to any hope of the occasional third passenger. In fact, even the lucky twosome need to be fit and trim to slip in and out of the low footwells and over the high sills, and those silly wire check-links that Fiat insists on putting on the doors don't help matters. Once in, though, the new seats—now vinyl-trimmed with cloth inserts—offer excellent lateral support, although they are sweaty in warm weather.

The mid-engine design means that there are two luggage boots—one front and one rear—so stowage space is better than in most rivals. Both are opened by levers set in the passenger's door jamb—highly inconvenient for the British driver—but at least the rear boot, glovebox and engine compartment can also be key-locked if the car is left unattended with its roof off. Worried about the 16-station Voxson radio? Just press a button and out it pops, to go into a carrying-case.

The lack of oddments space inside the car, however, is a problem. There's a small shelf behind the seats, the glovebox will just about take a rolled-up handbook, and, if the weather merits shirt-sleeve driving, your passenger has to sit with your jacket on his lap. The quality of some of the fixtures and fittings leaves something to be desired, too: the carpet looks like a cheap offcut, and the brittle plastic ash-

Little



FIAT X1/9 1500

Mid engine: 1498cc/4cyl, OHC (belt); one twin-venturi Weber carb; 85bhp at 6000rpm
Rear drive: 5 gears; 18.3mph/1000rpm (5th)
Suspension: front—independent MacPherson struts, coil springs; rear—independent MacPherson struts, coil springs, lower wishbones, track control arms
Steering: rack and pinion, 3½ turns/32¼ft circle; 5J alloy wheels, 165/70 SR 13 radials
Brakes: unservoed discs all round

Parts/repairs (inc VAT)
clutch £37.76 (fitting 3.5hr)
exhaust £35.86 (0.7hr)
headlamp unit £8.65 (0.4hr)
front bumper £76.30 (0.7hr)
laminated windscreen £69.93 (0.8hr)

oil filter and points £4.51 (0.4hr)
major service 6000 miles (2.37hr av)

	per year	per mile
Running costs	£701	5.91p
Loss of value	£340	2.83p
Total depreciation	£1167	9.72p
Insurance group	6/7	

THE RIVALS CLOCK IN

Alfasud Sprint 1.5

MGB Sports

Triumph Spitfire

Triumph TR7 (4 speed)

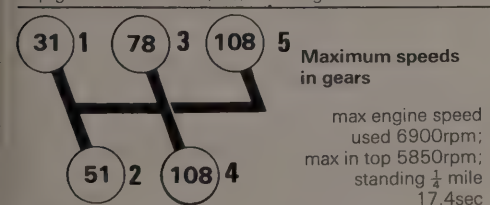
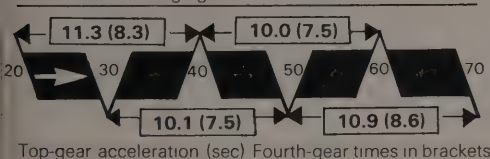
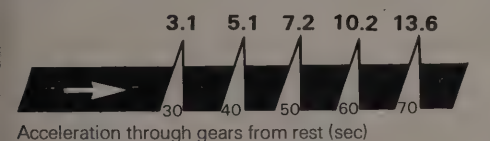
Volkswagen Scirocco GLS

darlin'

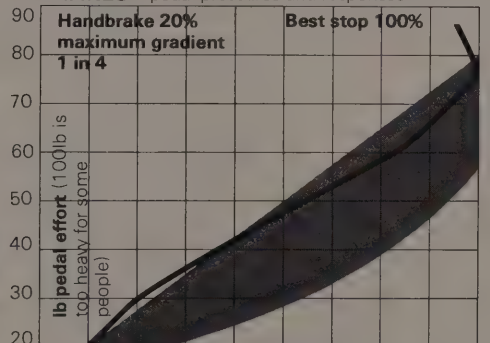


John Mason

PERFORMANCE



BRAKES—pedal pressures and responses



% efficiency (ideal car's braking performance falls within central zone—above, too heavy, below, too light)

Fade test pedal pressure needed for 75% stop (ideal car would show no variation)
65lb at start; **55lb** in constant use; **75lb** in severe use
Watersplash immediate recovery

FUEL 4-star/97 octane min overall consumption 36 1/2 mpg effective tank range 325 miles/9gal

Normal range of consumption

short journey, suburban	27 1/2 mpg
hard driving, heavy traffic	29 1/2 mpg
mixed roads—brisk, 50mph cruising	38 1/2 mpg
motorway—70mph cruising	39 1/2 mpg
quiet rural—40mph cruising	41 1/2 mpg

Consumption at steady speeds	4th	5th gear
30mph	51mpg	57 1/2 mpg
56mph	40 1/2 mpg	45 1/2 mpg
70mph	37 1/2 mpg	39 1/2 mpg
100mph	22mpg	24 1/2 mpg

SAFETY CHECKS

steering: energy absorbing?	No	hazard warning: fitted?	Yes
front seats: secure mounts?	Yes	interior: well padded?	No
head restraint?	Yes	w/screen: laminated?	Yes
front belts: effective?	No	doors: crashproof?	Yes
convenient?	Yes	childproof?	Yes
rear belts: Not applicable		petrol: spillproof?	Yes
		brakes: failsafe?	Yes
		load sensitive?	No

ON-ROAD PRICE (£)	CAPACITY (CC)	FUEL OVERALL (MPG)	MAXIMUM SPEED (MPH)	0-60MPH (SEC)	30-50MPH IN TOP (SEC)	BEST STOP (% g/lb)	OVERALL LENGTH (FT/IN)	MAXIMUM LEGROOM FRONT (IN)	TYPICAL LEGROOM REAR (IN)	STEERING TURNS/ CIRCLE (FT)
4549	1490	31 1/2	101	12.2	11.7	98/60	13' 2 1/4"	42 1/4	35 1/2	3 1/2/36 3/4
4351	1798	27	101	12.4	10.9	100/70	13' 2 1/4"	42 3/4	NIL	3 1/2/33 3/4
3665	1493	35 1/2	97	12.5	10.5	94/100	12' 4 3/4"	40 3/4	NIL	3 3/4/25 1/2
5111	1998	28 3/4	108	10.2	7.4	100/60	13' 4"	42	NIL	3 3/4/29 1/2
5110	1588	33 3/4	104	10.6	9.0	92/50	12' 8"	41	33	3 1/2/32 3/4

tray in our car broke under the strain of cigarette ash . . . well, cigar ash.

The heater is a crude do-it-yourself, air-blender affair that belts out prolific warmth when set on maximum but proves fiddly for any intermediate temperature. There are fresh-air vents, so it is possible, with practice, to gain a warm-feet/cool-face atmosphere.

The coolest face comes by undoing two clips that quickly release the plastic roof, which can then be stowed ingeniously in the front boot, taking up only a small amount of luggage space. The targa styling means that the X1/9 retains its rear window and side pillars, so wind buffeting is minimal.

The X1/9 is not a quiet car, but, with the roof off, it does seem to make all the right noises. With the roof on, however, there are some nasty boom periods that come and go from 65mph up to the rev limit. Wind noise is also intrusive at speed.

How strong

Rust resistance, or the lack of it, has long been the Achilles' heel of the Italian motor industry, and to combat this tarnished image both Alfa Romeo and Fiat have been particularly vocal of late about their rust-prevention measures. The Fiat method consists of primer dips, a coating of pvc on the underside, backed up by wax spray, wax injection into the box sections and front wheel-arch liners. All good stuff as far as it goes, but, alas, it doesn't always go as far as it should. The centre section of our car was well treated, but there was little or no sign of protection at the front and rear ends, and the dreaded canker was beginning to take hold on our youthful test car. Our endoscope—a roving eye on a flexible probe—couldn't find much wax in the box sections, either.

Some of the bodywork seemed very tinny, and the driver's door was misaligned and needed a good slam to shut. Apart from a few paint nibs, the general standard of finish was good.

We haven't heard anything untoward concerning reliability

(write, please, don't phone) and the mechanical specification is impressive—there's even an electrically controlled cooling fan for the carburettor.

How safe

There's no brake servo fitted to X1/9s—from our past experience of Fiat servos, a blessing in disguise: they tend to help too much, and stand the car on its nose for ridiculously light pedal loads. Our brake graph on page 17 illustrates the X1/9's sensible progression up to its best stop of 1g, achieved for an almost-ideal pedal pressure of 70lb. We like it that way because a panicky stamp on the pedal is unlikely to take one over the top of maximum efficiency and lock up the front wheels. It takes a lot of hard braking to produce even a mild sign of fade, and recovery from our watersplash test was immediate. Less impressive was the handbrake's performance. By itself, it managed only 20% efficiency—less than the 25% legal requirement—and a real muscle-flexing tug was needed to stop the car rolling down a 1-in-4 incline.

It is possible to provoke the Fiat's tail into a slide by darting into a bend and then lifting off the throttle, but there is so much warning of breakaway that, if the driver finds himself spinning round, he has only himself to blame.

The Fiat fares well in our safety checklist, but the seatbelts are marred by centre stalks that are too long, causing the buckle to sit high on the pelvis. We would also like to see more safety padding around the laminated screen and some method of masking off the spiteful-looking roof clamps that are bared when the sun visors are in use.

How much

The X1/9 is a hard car to pin down in terms of value for money: compared to British two-seaters, it isn't cheap, but then no one offers anything quite like the X1/9. Until that situation changes, we guess it's a matter of Fiat charging as much as it dares. Sticking our necks out, we'd say it's about

right at the moment. Depreciation is not as good as the MGB GT, but sports cars in general do seem to hold their price on the used market. One thing is for sure, however: at Group 6 or 7, depending on the company, the X1/9 is not a cheap car to insure.

Most service parts are reasonably priced by importers' standards, but be prepared for some hefty bills if major items go wrong. Owners are sent on their merry way with a small toolkit and a chatty, informative handbook, but this is definitely not the car for the ham-fisted home mechanic: with the engine shoe-horned in a tiny compartment behind the seats, elbow room is virtually non-existent. Most routine maintenance items are readily accessible though. Warranty cover is for only six months (unlimited mileage), with 24 months (24,000) miles on most major components, and two years' anti-rust cover.

We have kept the best news till last—fuel consumption. By any sporty standards, the X1/9's 36½ mpg overall is excellent; alongside its performance, it's nothing short of remarkable. One would have to be either a very hard driver indeed or do a lot of short-journey work to get below 30mpg. Otherwise, it's nudging 40mpg on a legal-speed run, and our 70mph figure is the best we have ever recorded from any car.

Verdict

The wind of change has certainly taken a long time to blow through the budget sports-car market, but, now that it has, the X1/9 is the one for others to catch.

But would we buy it? Well, with handling that had us calling it 'the rollerskate', and mpg to please Scrooge-in-a-hurry, there were always more would-be testers than hours in the day.

But would we buy it? Well, if Fiat could give it a less-brutish gear change, make it less of a buzz-box around town, and give it a build-quality to keep it looking better longer, it would be near perfect.

But would we buy it? Well, if only we had the courage to tell her mother to take a bus . . . yes—we'd bite Fiat's hand off!



The new recruit to DRIVE's consultant panel of private motorists is Claire Parker, a 25-year-old housewife from Whitchurch, Hants. Claire's a member of the Institute of Advanced Motorists and, while husband David is out in his company Ford Capri 2000GL, she copes with an elderly Austin 1100.

Still on our Everyman panel are Andrew Perry, 34, an antiques dealer from Knaphill, Surrey, who drives a Peugeot 504 estate, and Fred Pocock, a 50-year-old building consultant from N London, who runs an automatic Ford Granada.

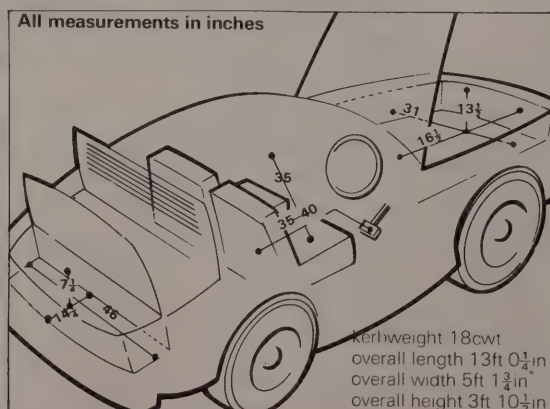
The battle of the new and old—Fiat's X1/9 versus the MGB GT tested on page 20—was decided for our amateur testers by the Fiat's roadholding and sheer driving fun.

'Acceleration's good,' said Andrew, 'and its manoeuvrability and handling are so excellent that, whenever I made a mistake, the car put it right by itself. The Fiat feels fast, too, but I don't think it could keep pace with some saloon cars of the same engine size. Perhaps that's because I found the gears a bit awkward to engage, but the brakes gave me a lot of confidence.'

'On the whole, I agree with Andrew,' Claire told us. 'I found the X1/9 exhilarating to drive—and everyone's head turned as I passed. I don't think that it goes as fast as it looks, though. I tried to shake-off the test Renault 18TS while going through a corner, but when I checked my mirror it was still there. I suppose the main thing is that it seemed very willing.'

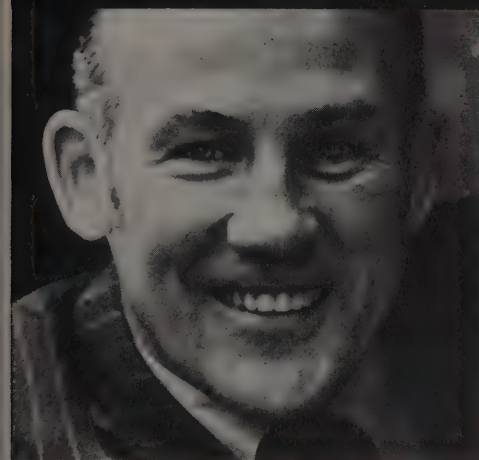
Fred found the Fiat very different from his Granada estate: 'I really enjoyed driving it. Everything seemed so positive, and, when I took it round a corner—wow! I didn't have any trouble with the gear shift, except that the knob's set too high and the change from fifth to fourth is vague—I put it into second twice by mistake. The clutch was a bit sharp, and the pedals were set too close to each other for my feet, but otherwise it was very snug and comfortable.'

The Everyman panel was chaperoned by DRIVE's professional tester Bob Oxford, who comments: 'Claire would not have done the Fiat full justice if she was changing gear at a mere 4000rpm. Our tables show what can be achieved at 6900rpm.'



“Protectol Rustproofing? If it wasn't good, you wouldn't catch me saying it was!”

Stirling Moss



“When Protectol came along and asked me to help them sell their rustproofing, I started thinking of the nicest way to say ‘No’. But they were very enthusiastic about bringing more motorists the benefits of their system, and really wanted to get the message across. Naturally I became curious. So I asked them what it had going for it.

‘It’s the best in Britain,’ they said, ‘because we’ve developed it far in advance of earlier methods - using modern laboratory and simulated weather tests in the UK and abroad.’

The application is very thorough, the products are non-drip and cleanly applied.

The technicians are highly trained. The stations have the AA Seal of Approval and you can’t go better than that!

Okay, I thought, that’s fine for Protectol. But what about the customers and their cars?

‘Well - they benefit, naturally. That’s what good rustproofing’s all about. Look at our Gold Seal system. It has a 12 year guarantee - the longest on the market; and our Standard system has a 6 year guarantee. Both are transferable and have clauses without catches. They have to, to meet the AA’s Seal of Approval requirements. We don’t mess about you know.’

So they weren’t just another rustproofing system, I suggested.

‘You bet we’re not. In fact Protectol pioneered modern clean vehicle rustproofing in Britain.’

So I asked them why I hadn’t heard more about them before?

‘Because we didn’t have Stirling Moss to sell Protectol.’

That did it. From now on I’ll be telling you a lot more about Protectol and Gold Seal Rustproofing.



Because if it wasn’t good - you wouldn’t catch me saying it was!”

Stirling Moss
Stirling Moss.

If you’d like to know more before you read our next Stirling Moss advertisement, send this coupon for details of Protectol Rustproofing and the address of your nearest station (there are almost 100 Protectol Stations - check in your local Yellow Pages). You don’t need a stamp.

Name _____

Address _____

Tel. _____

Send to: FREEPOST,
Protectol (Rustproofing) Ltd.,
Commercial Yard, Galgate, Barnard Castle,
Co. Durham DL12 8BG.
Tel: Teesdale (0833) 38638/37752.

CAR TESTS

All our yesterdays—a roadster from days when men were men and Deep Throat was simply an exhaust noise . . .

MGB GT

Price £4833 On the road £4949

It seems too quaint to recall that, in 1962 Britain, just about every teenager had dreams of driving to Liverpool, radio blasting out the Beatles, in the new Jaguar E-type or even newer MGB.

Four years later, those same youngsters could tailor their ambitions to a brand-new concept in motoring—the first sporting coupé with a hatchback and folding rear seat; why, you could even cram your wife and new baby into an MGB GT! Executives at BMC must have been rubbing their hands with glee: first they had the topless sports-car market all to themselves, and now they were first in with the sporting coupé.

Well, the Beatles have gone, the E-type, too. But the MGB GT is still on offer, brand-new from the showroom. And now that those young dreamers are middle-aged, they can probably, for the first time, afford it.

But do they still want it?

How it goes

The 1798cc B-series engine that powers the MG has fought many a campaign for Leyland over the years as the main power pack of its medium-car range. However, with the recent advent of the O-Series overhead-cam power unit, its days seem numbered. Designed long before anyone had ever heard of exhaust-emission control, the old-timer is now seriously showing its age.

Although a good starter, it needs careful choke control to nurse it through a very temperamental warm-up period. But it never does settle to a really reliable smooth-idle, threatening to stall on the mildest of gradients and frequently running-on after being switched off.

Power output is quoted at 97bhp, which looks fair compared to most rivals; but performance figures are such that one couldn't seriously consider the B as a speed merchant's machine. True, it will still see a furious 100mph—just—but, pushed up through the gears, it becomes so frenzied and harsh that one wonders if it is really worth hanging on until the 6000 rpm limit for the mediocre results gained. Cars such as the Volkswagen Scirocco put it to shame.

The MG feels and sounds at its best with the tachometer needle swinging around mid-range. There's a strong and even flow of torque, and the engine will pull calmly and lustily from as low as 20mph in top gear.

The medium-weight clutch has a smooth and informative take-

up, and the stubby gear lever slices precisely, if rather stiffly, through its narrow gate. Our test car's third gear occasionally disengaged, and reverse, with an awkward across-and-back movement, can be difficult to select at times.

Overdrive is standard on third and top gears, making the MG, to all intents and purposes, a six-speeder, and just a touch on the clutch as you flick the gear-knob-mounted switch helps it engage and disengage very smoothly. It's a facility that endows the car with a long-legged feel, but it's a pity that, at 70mph, overdrive top coincides with a nasty exhaust boom that can spoil motorway cruising.

DRIVE testers found the extra ratio of overdrive third a great boon in winding country roads, making 'electric' shifts at the flick of a switch.

American legislation can be blamed for the increase in the B's ride height that made way for those rubber bumpers that upset traditionalists. A more-cogent criticism is of the resultant softer springing, and noticeably more body roll as the car is pressed into a bend. Despite this, however, the MG is still an enjoyable car for the enthusiast to hustle down a country road, and, although the leaf-sprung live rear axle does

HOW GOOD

At-a-glance

DRIVE's verdict on the MGB GT, taking into consideration its rivals, its price and what kind of car it's *meant* to be

Out of five

PERFORMANCE

●●

FUEL ECONOMY

●●

HANDLING/STEERING

●●●

COMFORT/REFINEMENT

●●

INTERIOR SPACE

●

PASSENGER AIDS

●●●

DRIVER AIDS

●●●

ACCIDENT/INJURY SAFEGUARDS

●●●

RUST RESISTANCE

●●

RUNNING RELIABILITY

●●

tramp out of line on a bumpy bend, it does so in a controllable fashion that even adds to the fun. When it comes to entertainment, though, the B can't hold a candle to certain small, go-where-you-point-them Italians . . .

Lighter and more manoeuvrable at town speeds than earlier models, the B's steering still requires a fair bit of muscle power by modern standards, especially as the castor action to straighten-out builds up on hard cornering. The mechanism is precise, however, and gives a good 'British' sense of road feel.

Anyone coming from a saloon to the B's cockpit will, of course, find the driving position initially very strange—the low seat, the horizontal, stretched-out legs, the reach upwards to grasp the gear lever. Drivers, however, are adaptable creatures, and ours soon felt in control. There's plenty of legroom for the tall driver, and the well-shaped seat offers good support.

The important minor controls are governed by twin column-mounted stalks within convenient fingertip reach of the padded wheel. The main lighting is controlled by an odd-but-effective square flickswitch, also mounted on the steering column, and there's a small bank of easily reached, illuminated rocker switches in the centre of the fascia.

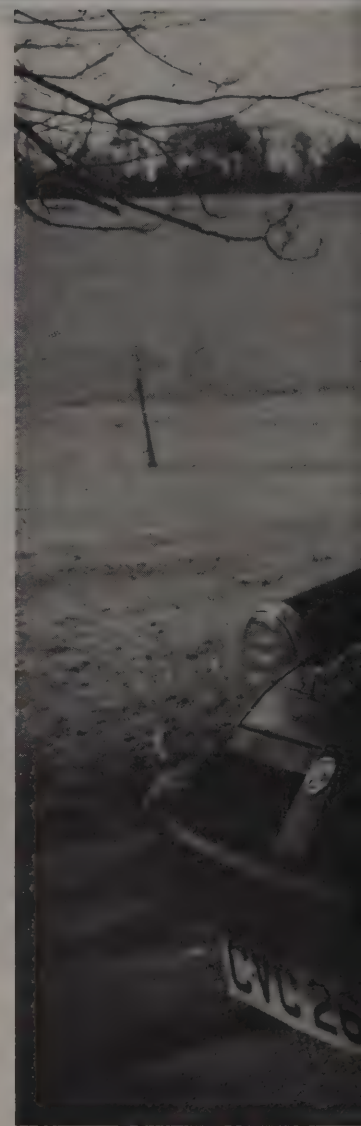
The large and accurate speedometer and tachometer are in clear view through the wheel, separated by the fuel gauge and four small warning telltales. The oil-pressure and coolant-temperature gauges are less-than-ideally placed on the outer edges of the instrument binnacle, where they tend to be masked by the driver's hands.

How comfortable

Although softer and more compliant than ever before, the B's ride is yet another area in which its grey hairs are becoming more and more difficult to disguise. On anything less than a billiard-table-smooth surface, it feels restless and knobbly—a characteristic that many a sports-car driver would readily accept, were it not for some downright crude jolts that feed their way into the interior.

The sales brochure says that the B's engine strikes a distinctive note; well, some of DRIVE's testers thought it was B-flat, and much too distinctive. At anything over 4500rpm, it becomes harsh and vibrant. Wind noise is a high-speed problem, too.

Sports cars are for the young at heart, but one needs to be young of body, too, for dignified entries and exits. The MG's doors open wide and stay put-against either wind or gradient, but the low roof-line and narrow foot-entry space mean that one has to



MGB GT

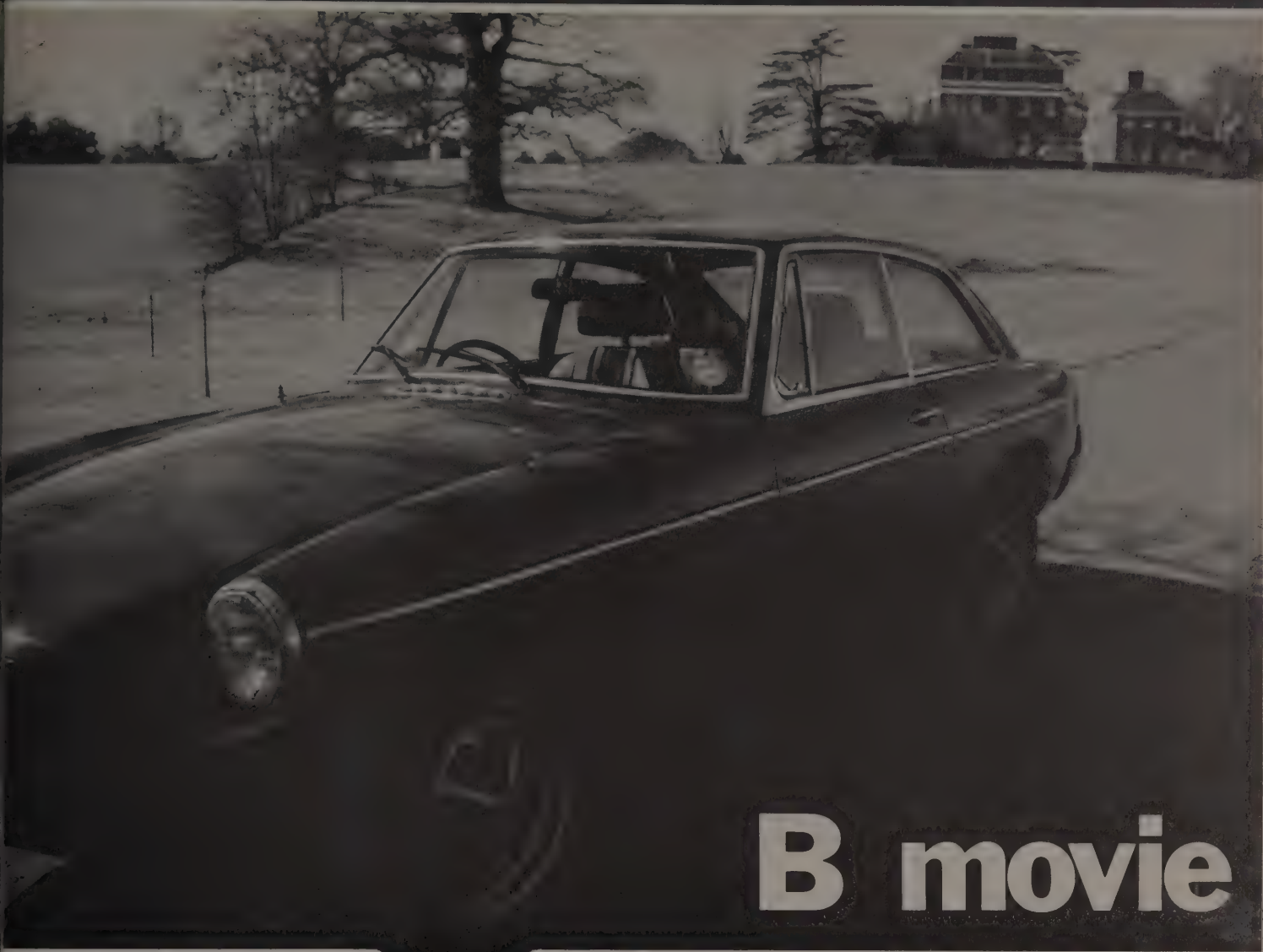
Front engine: 1798cc/4cyl. OHV (chain); twin SU HIF4 carb; 97bhp at 5500rpm
Rear drive: 4 gears (O/D on 3 and 4); 18mph/1000rpm (22mph/1000rpm O/D)
Suspension: front—ind coil springs, wishbones, anti-roll bar; rear—live axle, semi-elliptic springs, anti-roll bar
Steering: rack and pinion, 3½ turns/33½ft circle; 5J wheels, 165 SR 14 radials
Brakes: servoed discs front/drums rear

Parts/repairs (inc VAT)
clutch £34.71 (fitting 4.8hr)
exhaust £44.93 (1.05hr)
headlamp unit £15.36 (0.3hr)
front bumper £53.46 (3.25hr)
laminated windscreen £30.24 (2.7hr)
oil filter and points £2.51 (0.85hr)
major service 6000 miles (3.45hr av)

	per year	per mile
Running costs	£749	6.24p
Loss of value	£116	0.97p
Total depreciation	£942	7.85p
Insurance group	6	

THE RIVALS CLOCK IN

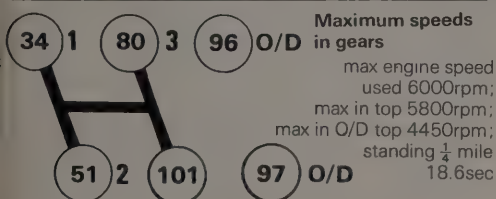
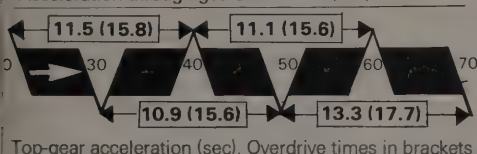
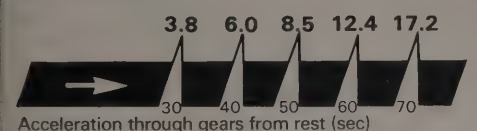
Alfasud Sprint 1.5
Colt Celeste 1600GS
Ford Capri 2000S
Triumph TR7 (4 speed)
Volkswagen Scirocco GLS



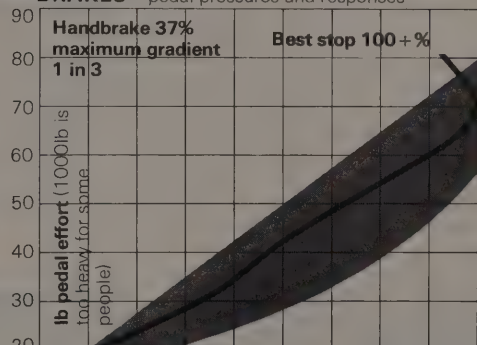
B movie

John Mason

PERFORMANCE



BRAKES—pedal pressures and responses



% efficiency (ideal car's braking performance falls within central zone—above, too heavy, below, too light)

Fade test pedal pressure needed for 75% stop (ideal car would show no variation)
43lb at start; 32lb in constant use; 40lb in severe use
Watersplash immediate recovery

FUEL 4-star/97 octane min
overall consumption 27mpg
effective tank range 280 miles/10 1/2 gal

Normal range of consumption

hard driving, heavy traffic	18 1/2 mpg
short journey, suburban	19 mpg
motorway—70mph cruising	27 1/2 mpg
mixed roads—brisk, 50mph cruising	28 mpg
quiet rural—40mph cruising	33 1/2 mpg

Consumption at steady speeds	4th	4th O/D
30mph	35 1/2 mpg	40 1/2 mpg
56mph	31 1/2 mpg	34 1/2 mpg
70mph	25 1/2 mpg	27 1/2 mpg
max mph	15 1/2 mpg	18 1/2 mpg

SAFETY CHECKS

steering: energy absorbing?	No	hazard warning: fitted?	Yes
front seats: secure mounts?	Yes	interior: well padded?	No
head restraint?	Yes	w/screen: laminated?	Yes
front belts: effective?	Yes	doors: crashproof?	No
convenient?	No	childproof?	Yes
rear belts: fitted?	No	petrol: spillproof?	No
		brakes: failsafe?	Yes
		load sensitive?	No

ON-ROAD PRICE (£)	CAPACITY (CC)	FUEL OVERALL (MPG)	MAXIMUM SPEED (MPH)	0-60MPH (SEC)	30-50MPH IN TOP (SEC)	BEST STOP (% g/lb)	OVERALL LENGTH (FT/IN)	MAXIMUM LEGROOM FRONT (IN)	TYPICAL LEGROOM REAR (IN)	STEERING TURNS/ CIRCLE (FT)
4549	1490	31 1/2	101	12.2	11.7	98/60	13' 2 1/2"	42 1/2	35 1/2	3 1/2/36 1/2
4249	1597	30 1/2	94	14.0	11.2	88/40	13' 6"	40 3/4	34	4/31 1/2
4838	1993	30 1/2	109	10.9	9.6	100/55	14' 4 1/2"	41	36	3 1/2/34 1/2
5111	1998	28 3/4	108	10.2	7.4	100/60	13' 4"	42	NIL	3 3/4/29 1/2
5110	1588	33 3/4	104	10.6	9.0	92/50	12' 8"	41	33	3 1/2/32 1/2

develop the knack of sliding in. Courtesy-light switches on the side doors operate a silly little map light on the fascia, which is next to no good at all at night; why they are not connected to the main interior light defeats all logic. Once seated, however, both driver and front passenger can stretch out in comfort. An awkward-to-reach knob at the base of the seats releases the backrests for access to the rear bench—but if you are considering the GT because of its rear seat, forget it: it proved difficult to shoe-horn even one eight-year-old into the most cramped 2 + 2 rear that DRIVE has come across.

The MGB GT may have led the field as a small hatchback coupé, but it is now being shown the way by more recent arrivals. There's no divided rear seat, for instance, or rear load canopy; the rear seat is folded forward by releasing two crude metal clips; the increase in luggage space is small but useful, but it doesn't take much baggage to obstruct the rear view; and stowage space inside the car is limited, with precious little readily available to the driver.

A recent facelift included striped-cloth-covered seats in a vain attempt to brighten up the interior, but there's still a lot of unmistakable black plastic around, and the MG owner is hardly treated to an exciting array of motoring-life goodies.

Heating is via a water valve and takes ages to warm up; it then proves almost impossible to regulate, but large fresh-air vents mean that one can eventually achieve a cool-face, warm-feet atmosphere. Cool air can also be ducted to the footwells by moving an awkwardly placed, cheap lever, positioned on the wrong side of the transmission tunnel. All-round demisting is reasonably prompt.

The view from the driver's seat is hampered by wipers that leave large unswept areas on the screen, but the unwiped rear glass keeps clean on wet days. Powerful halogen headlamps cut an excellent path down darkened lanes. The sloping bonnet makes parking guesswork for short drivers, but,

apart from this, all-round visibility is fair.

How strong

We know from past experience that the rust-bug is very partial to the B's sill panels and door bases, although it takes some time to sink its teeth into the more-meaty structural parts underbody. Leyland's standard repellent is a bituminous-type sealant, but coverage is patchy, and the exposed brake pipes remain completely untreated, as do the box-section interiors. Inside the doors, there are signs of a light coating of wax, but not enough to be taken seriously.

On top, one or two minor paint faults and a badly fitting driver's door and tailgate raised testers' eyebrows, and there's a lot of brightwork around to start interaction and rust between metals.

Mechanical reliability has been a sore point for Leyland of late: it's the silly little things that let its cars down. We went through two speedometer heads during the B's 1000-mile test, for instance, and the car was returned (at 3000 miles total) with an exhaust system that sounded much the worse for wear.

How safe

The MG's brake pedal has a disconcerting, long-travel, spongy feel, but the car marched through DRIVE's standard tests with great aplomb: all-square stops up to an excellent 1g gave the reassurance essential for this sort of car. The rigours of our tests were unable to induce the slightest trace of fade, and the disc/drum system showed no ill effects after a good soaking.

The limit of roadholding is not particularly high for a sports car, but, as we said earlier, the docile and controllable manner in which the tail swings round is enjoyable rather than worrying. Ultimately, however, we can't condone any car that loses its rear end, however predictably it does it.

We felt a little guilty about putting 'no' next to well-padded interior on our safety checklist: just a *little* more cushioning around the screen would have

clinched a 'yes'. Seatbelts, though, are undeniably awkward to reach, and the webbing invariably gets tangled before it makes it all the way back to the reel boxes mounted high up on either side of the rear bench. The door locks are the old-fashioned push-button type that could allow the door to fly open in a side swipe.

How much

Despite the years, Leyland makes absolutely no concessions on the MG's price. Rivals such as the Ford Capri 2000S, Alfasud Sprint and Colt Celeste 1600 are all cheaper, and the Triumph TR7 and Volkswagen Scirocco are only slightly dearer and an awful lot more sophisticated.

Parts costs and labour times, too, are reasonable, and it shouldn't be too difficult for owners to find a local garage to look after servicing and repair needs. There's a 12-month, unlimited-mileage warranty with Supercar that can be extended for an extra year.

Access to most routine-maintenance items is good, apart from the battery buried under the rear seat. With the undemanding nature of the mechanicals, life looks easy for the DIY owner.

Fuel consumption is undistinguished—27mpg overall; most obvious rivals do better than 30mpg. And even that modest figure plummets to under 20mpg around town or in heavy traffic. It takes liberal use of overdrive and a gentle right foot to better 30mpg.

Verdict

Have we been too unkind? Well, reading this report could leave you with the impression that the MGB GT is a corpse that won't lie down. But we have to accept that nostalgia is still a very saleable quality in a sports car, and what some buyers would regard as crude—such as the rasping engine note—others will see as essential.

In the end, even our unromantic testers were being won over. The B isn't all that fast, but it does *sound* furious, and it is still undeniably fun to drive.

Perhaps MG ought to offer a flat cap and a handlebar moustache as optional extras...



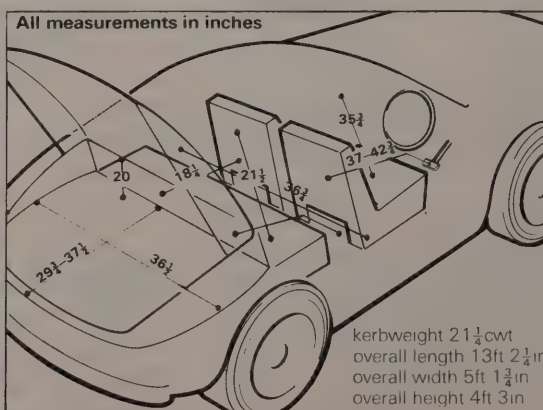
The traditional British sports car divided our amateur testers between fond memories of the MGB GT's youth and the less rosy realities of their day's testing. The votes split into yes, no and maybe...

'There's lots of prestige attached to the MG badge,' said advanced motorist Claire Parker. 'People have been telling me for years that I should get one and that I'd love it. Well, I did like its looks, but it is dated—the round headlamps seem very old-fashioned. I didn't like the odd-looking bumpers either, but if they can take knocks without damage then the MG shoots up in my estimation. The gear lever was difficult to move, but I liked the armrests and the visibility of all the dials. Handling was all that I wanted, but the MG's ride was terrible and I was disappointed by its performance.'

Antiques dealer Andrew Perry just couldn't understand the MG's appeal. 'It has been around long enough for MG to know that it sells—but who buys it? I think it must be an ego-trip for masochists. Wind noise, a loud engine, and having to crawl in—I found everything I expected. It's all part of the image, I suppose. Inside, it's like being back in the womb—a dark cocoon. Legroom is good—should you want to drive flat on your back. Performance was disappointing, the ride's like a 10p fairground trip, and it only cornered well when the road's camber went the right way.'

'It certainly seems to enclose you and make you comfortable,' said building consultant Fred Pocock. 'The seats stop you from being thrown about, but if you want to wrestle with the steering wheel you are so enclosed that you knock your elbows. Every time I let the hand-brake off I crashed my knuckles—easily done if you are a bit fat-handed—and I found gear changing a bit difficult at first, but after a few miles it was nice. It held the road better than I expected and the handling was all that I wanted; I thoroughly enjoyed my drive. The general finish looked good for a British car, and I think those big bumpers are a good idea.'

DRIVE's official tester Bob Oxford says: 'I suspect our amateurs had made their minds up *before* they got behind the wheel. I'm not a masochist, yet—like Fred—I found the MG fun to drive.'





MY KIND OF PLACE

Stars of India

SAUNTERING down The Broadway, Southall's main street, you might expect London's 'Little India' to offer a rich choice of restaurants.

Surprisingly, there is only one—though Indian sweetshops and take-aways abound. And, while eastern customers outnumber the whites in the Maharaja, on most

evenings, its reputation for superb Indian cuisine attracts visitors from all over the world.

In fact, in a booklet issued by Air India, it figures among the 260 recommended Indian restaurants outside the sub-continent itself, in places as far apart as Accra and Tokyo. In London, it is included in a select list of 22.

The surest way of finding the authentic dishes of a country is to seek out restaurants in the appropriate immigrant community—even though they can often only be found in the seedier sidestreets of big cities.

It was in Liverpool, twenty-odd years ago, that I first ate genuine Chinese food. A bowl of special fried rice eaten in a ramshackle café in the shadow of the old cathedral converted me to the proposition that, after an evening 'on the town', good Chinese food had sobering properties unequal-

led by any other good cuisine.

London's a marvellous place to hone your palate on exotic flavours, with Turkish, Persian, Korean, Japanese, Mexican and Russian restaurants providing exciting new dishes for comparatively modest budgets. And Arab influence is increasingly demanding such high standards that London is fast becoming the centre of the most authentic indigenous food outside the Middle East.

There are even signs of a growing interest in Greek, Turkish and Japanese foods in other parts of Britain. And if they can maintain the standard of places such as the Maharaja in Southall, perhaps one day I'll find my kind of place a few yards down every High Street.

ROLAND WEISZ

Roland Weisz was deputy editor of DRIVE from 1973-1979, and is now compiling a new AA restaurant guide, to be published next year.

XX Rajdoot

Park Street, Bristol
(tel 0272 28033)

The Bristol Rajdoot, as those in Birmingham and Manchester, offers authentic Eastern décor and food. Though mild, the traditional dishes—tandoori, rogan gosht and massala—are prepared with a subtle blend of fresh spices to bring out their full flavour. Table d'hôte £2.40; dinner for two, including wine, about £16.

XX Lebanese Food Centre

Sloane Street, London SW1
(01-235 2827)

Surrounded by his wealthy Arab clientele, proprietor Asil Bibi will enthusiastically explain to you the variety, complexity and ritual of his extensive Middle-Eastern menu. Dish of the day about £3; dinner for two, with wine, from £14.



GREAT ESCAPES

Treasure island

THERE WERE crows not parrots, pines not palms, and the only wild beasts were rabbits. But as treasure islands go, ours must have been in the millionaire class. They can organise those lavish, all-electronic-aids searches of tropical isles for as long as they

want, but they won't unearth the trove that has been found on temperate little Gotland—more than 700 finds.

You don't need some yellowing-parchment pirate map, just a couple of car-ferry tickets to get you from England to Gothenburg and then from the Swedish mainland to this unspoiled, green island off the Baltic east coast. I don't say that you will have any greater success than we did as a kind of Swiss Family Glenton—which was nil; but you never can tell. Just before we landed, some children had found the latest hoard of buried treasure... down a rabbit-hole.

That was typical of how most of the trove has come to light. But why so much so far from the piratical wakes of Bluebeard, Kidd and Morgan?

You have to flip through medieval history to find the answer—back to the days when most of the wealth of northern Europe passed through the hands of the merchants in the rich Hanseatic cities.

Visby, capital of Gotland, was one of the richest of them all. It became a lure for the Nordic

version of freebooters. They plundered Visby so much that the only safe banks were those where the wild strawberries grew. Unfortunately, most Gotlanders forgot to tell anyone where it was.

Today, the trove still keeps coming to light as new foundations are dug and fields are ploughed. But even if you don't find any around this delightfully rural island of peaceful woods, uncrowded green byways and coves and beaches, there is plenty to be found in the local museum.

This lovely, well-preserved example of a medieval fortified city, so much off the well-trod tourist track, comes as an unexpected joy. It is matched only by the traditional charm of the simple little villages and fishing communities scattered around.

If you miss out on trove you may, more easily, find fairies. At least, that is what many islanders still believe in. But be careful you don't mistake the 'baddies' for the 'goodies': there is a breed of wicked goblin that can be as mischievous as air traffic controllers upsetting holiday flights! Gotlanders keep on the right side of them by putting out milk and

food at night as peace offerings.

The mythology and other rich folklore—let alone the treasure—makes the island a perfect place to take youngsters. A good spot, too, for a family cycling holiday, with plenty of bikes for hire.

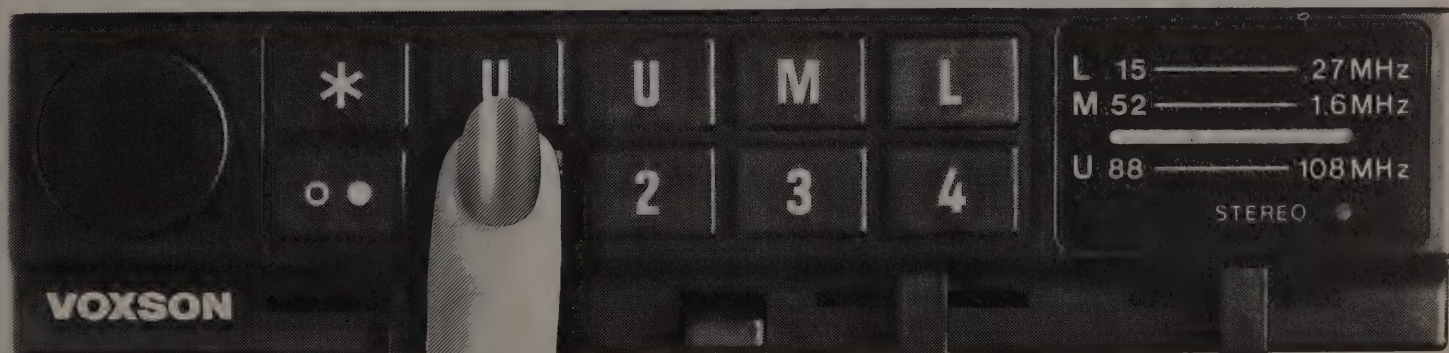
But make sure that you save some money for dining out. Local eating places serve a tasty choice of dishes peculiar to Gotland, including a special kind of pastie, smoked flounder, and several unusual mutton dishes.

The truth is that the *real* treasure to be found is right under your nose.

BILL GLENTON

Holidaymakers going by car cross from Felixstowe (Tor Line) or from Newcastle (Tor/DFDS) to Gothenburg. Single fare for adults is (respectively) from £34 and £40 (children £15). One-way car charge is £15 (any length up to 6 metres). To reach Gotland, drive cross-country to Nynashamn for the short ferry voyage to Visby (adults £7.30, car £8, children half price).

There are also advanced-purchase air fares (APEX) that reduce the cost of flying out there—return Gothenburg £75, return Stockholm £92.



Mostro

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PRINCESS. CAR FOR M



Side by side with the average car, the Princess gets you off to a flying start, even before you get into first gear.

There's absolutely nothing average about the aerodynamic shape. Inside, there's room for a bigger than average family.

And no need for the usual knees-up routine in the back.

There's more legroom than

average, both front and rear.

With comfortable seats of arm-chair proportions and a choice of 240 driving positions.

Likewise, your luggage travels more comfortably in a Princess. The boot has more usable space than average: 12.6 cu. ft.[†]

There's nothing average about the new 1700cc and 2000cc overhead cam engines, either.



NOT THE R. AVERAGE.



Even the powerful 2 litre engine gives you a better than average petrol consumption of 27.2 m.p.g. in stop-start town motoring.

Will all cars this big give you such a comfortable ride? Not a bit of it.

To quote 'Motor' magazine, the Princess has "a ride that overall is comfortably better than average."

But for all its size, we have to admit that the Princess does fall

considerably below average in one respect. Its price.

The Princess range starts at only £3,974. There are five Princess models to choose from.

See your Austin Morris dealer for a test-drive.

The Princess comes in a choice of 11 colours. None of them are grey.

Princess 
From Austin Morris. With Supercover.



MOTOR SPORT

Good sports

IT WAS Tim Birkin, the elegant and eloquent 'Bentley Boy' of the 1930s, who explained his addiction to motor sport as 'the only exciting sport I can participate in while sitting down'. Today, the cars travel at twice the speed, but the rule still applies: the Grand Prix driver does his job sitting down at close to 200mph.

Not that it's a relaxed business. Far from it. The strains imposed on a GP driver, or a rally driver, are enormous. The force of gravity generated by a Grand Prix car cornering at 150mph is close to 2g—'enough to push your stomach against your spine,' says John Watson.

At 2g, a driver finds his head moving like a pendulum; his helmet weighs more than 7lb, and

many drivers have to take exercise to strengthen their neck muscles. James Hunt trained with a soccer team, and practised heading a football; Jody Scheckter once finished a sports-car race literally holding his head up with one hand, his neck muscles spent.

Physical stamina, rather than physical strength, is needed by both rallymen and racers, and the majority of front runners indulge in some other sport to help maintain their fitness... although some maintain that the only thing that keeps you really fit for racing is more racing. (The late Ronnie Peterson was one who believed in this theory. His only leisure activity outside racing was keeping tropical fish!)

Drivers often come into motor racing having previously been very competitive in other sports. Rallyman John Taylor was a National Hunt jockey who rode the Queen's horses; he also plays golf off a handicap of 2. Fellow-rallyman Roger Clark played water polo for his county; Jackie Stewart was an Olympic clay-pigeon shot; and Graham Hill was a first-class shot and cricketer.

James Hunt played tennis at Wimbledon level as a junior, and squash for his county team; McLaren's No 2 driver, Frenchman Patrick Tambay, was in his country's ski team.

Jody Scheckter is probably the fittest of all current GP drivers: he

maintains a regular gym programme, and keeps a set of weights in his Monaco apartment. He also plays tennis regularly, and, in the words of his coach, 'is very effective because of his speed and his sense of anticipation'.

Many regular racers play ball games, mainly golf and tennis. It fits into the social pattern of their lives, and provides them with the exercise that promotes stamina.

Stuart Turner, when Ford's motor-sport boss, took footballer Jimmy Greaves and turned him into a competent rallyman. Turner believed that, given an athlete with an interest in cars, a sense of balance and a fierce competitive spirit, he could make a competition driver of him. He was right.

A tennis pro who occasionally plays with GP drivers, tells me: 'I could take any one of the top drivers today and, with six months' intensive coaching, make a tournament player of him. Speed, anticipation and coordination, plus aggression—they have all the qualities needed.'

Racing drivers have always featured well in TV's superstar programmes. Stewart, Scheckter, Mass and Ickx have appeared and impressed their fellow-competitors with their performances. Commentator David Vine once summed up their attitude: 'I don't think they are particularly strong or fit. They seem to do it all from the mind.'

NICK BRITTAN

Blink Blink Blink

Flush of embarrassment

I have a gallon of flushing oil in my garage, the sort once used during engine oil changes. Can I safely add this oil to my petrol to act as an upper-cylinder lubricant?—A ARTHUR, MANCHESTER
No. It's a case of horses for courses. Unlike upper-cylinder lubricant, which blends compatibly with petrol, flushing oil is likely to separate out. In other words, it will break down into droplets which will gradually accumulate in the tank and work their way throughout the fuel system, eventually to clog the pipes, pump and carburettor.

Running target

I have been running a Renault 12 estate since 1973, in which time, apart from regular services, it has needed only two new rear wheel-bearings and a new clutch. Now, after 75,000 miles, I would appreciate your advice on how I might nurse it to the 100,000-mark.—G BRIMMER, CREWE

We would be surprised if you haven't had the exhaust system, brake linings, tyres and battery replaced within this time and mileage! These are the first items we would examine for corrosion, wear and deterioration. Your drive-shafts, too, seem to have given above-and-beyond their normal service. Check them for wear by

MAN ON THE MOVE STOP

DAVE DYMO, SUPER SALESMAN
IS ON THE ROAD AGAIN



THESE EARLY
MORNING MEETINGS
10.30 AND ALL I'VE
HAD IS A CUP OF
TEA!

GREAT—A
LITTLE CHEF
I SUPPOSE I'M
TOO LATE FOR
BREAKFAST

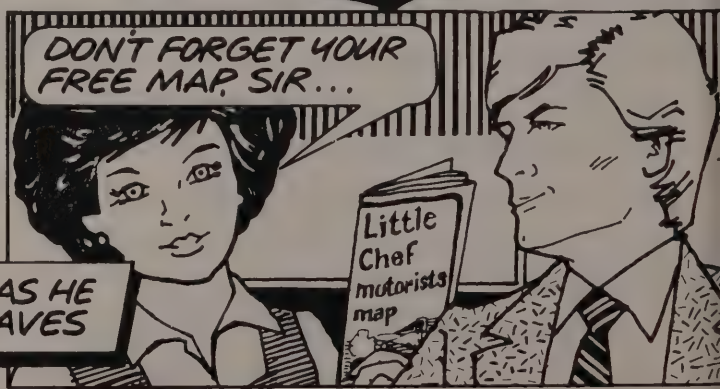


THEN A QUICK WASH AND BRUSH UP...



THAT'S
BETTER
NOW I'M
READY FOR
THE ROAD
AGAIN

DON'T FORGET YOUR
FREE MAP, SIR...



...AS HE
LEAVES

Little
Chef
motorists
map

Any problems? Whether they are technical, insurance or legal, DRIVE's experts can help. Write to: Clinic, AA, Fanum House, Basingstoke, Hampshire RG21 2EA

driving slowly on full steering lock in each direction, listening for the knocks or clonks that indicate wear. Examine also the driveshaft and steering gaiters, looking for splits that could let in water and dirt.

Rock the wheels to assess bearing play, and check there is no excess movement in the steering assembly. Test damper efficiency by applying the 'bounce test' at each wing—the car should settle after one-and-a-half bounces. Check the engine for ominous-looking oil leaks; examine brake pipes for corrosion and the flexible hoses for deterioration; and renew the brake fluid—a job that should be done every 18 months.

Alternatively . . .

I have a 1972 Ford Cortina 1600 that's equipped with a Lucas alternator, and should like to know whether the Gunsons Sparktune 2 offered in DRIVE (March–April) is suitable for testing its output. My manual stresses that 'home' tests should not be

made.—F G FOX, NEWBURY
Sparktune 2 is a versatile instrument capable of performing several useful electrical tests, but it will not check an alternator's output current. This test can be made only with an ammeter capable of reading 50–60amps. Sparktune can, however, be used to check the alternator's regulator setting. Run the engine for three minutes at about 2000rpm with the headlamps on; with the instrument connected across the battery terminals there should be a reading of 13.7–14.3v.

Golf handicap

I recently bought a VW Golf 1100L that has been afflicted from new with a most unpleasant vibration: after a few miles on the open road, my passengers quiver like jellies. All engineers' attempts to track down this problem have failed. Can DRIVE shed any light on the mystery?—N ALLIS, LINCOLN

Presumably your engineers have checked that all the wheels are correctly balanced, which is the first thing DRIVE would do. If wheel balance is correct, it's then likely that there's a fault in the transmission, such as an unbalanced clutch or flywheel, or—most probably—a faulty driveshaft assembly. We know of a Renault 5 which, from new, suffered from the same prob-

lem as yours, and the elusive vibration was not cured until a new driveshaft was fitted. Have your garage check your car for these points, or invest in an AA inspection, which should pin-point the trouble before it becomes serious.

Crashing bore

Having had two windscreens broken by flying gravel last year, I dread this season's road resurfacing. Can DRIVE please draw attention to the hazards of driving on newly-surfaced roads . . . for the sake of my wallet?—MRS L R COOK, THAMES DITTON

The AA's head of highways and traffic, Robert Hardy, says that, when road dressing has been recently carried out, drivers should:

- not exceed 15mph
- maintain a following distance sufficient to avoid any chippings thrown up by the vehicle in front
- not overtake—the short time saved is often outweighed by the need to replace a shattered screen
- brake and accelerate gently to avoid dislodging the new surface.

Remember, too, that a temporary windscreen carried in the boot is a valuable-get-you-home aid.

Fail safety

I have bought a new set of radially ply tyres for my car, which cost me almost £100, so I am anxious to

know the procedure for claiming a refund or a replacement tyre should any faults occur. Can you help?—A SPOTTER, CARDIFF

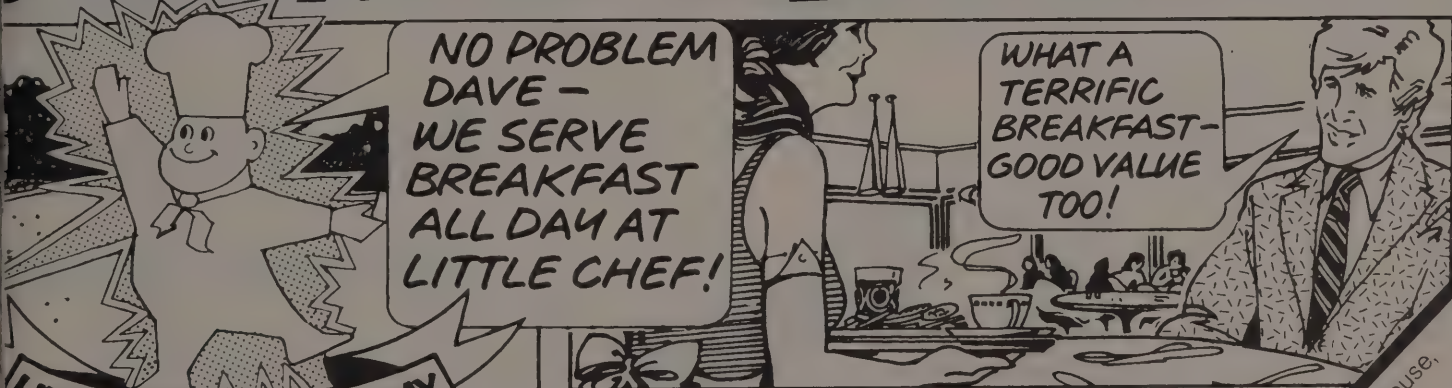
If a new tyre is defective, and the defect arose at the date of sale or soon afterwards, the buyer's rights are primarily against the seller under the Sale of Goods Act, in that the tyre is not fit for its purpose and/or not of merchantable quality.

There is, generally, no comeback against the manufacturer (your contract being with the seller), unless you can prove that there was a manufacturing defect. In this case, the tyre will have to be returned to the maker for inspection. Before you do this, however, you should have it examined and obtain expert technical evidence that there was a fault in the manufacture.

In DRIVE's experience, tyre makers are very fair in dealing with such complaints. However, in the event of a claim being rejected, an appeal can be made to the British Rubber Manufacturers' Association.

The drawbacks in having a private inspection are: finding a tyre expert with the latest and best equipment; expense; and, having paid for the inspection, it may reveal that the damage was caused by poor road conditions, such as a pothole, and not by a manufacturing defect! Only you can decide whether it's all worth it.

OFF AT LITTLE CHEF!

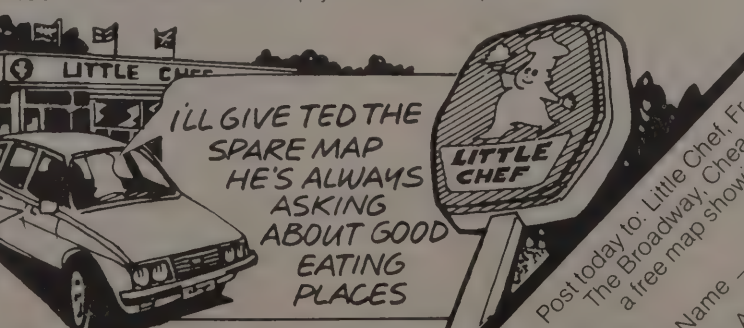


LITTLE CHEF MAKES THE DAY

GOT ONE THANKS BUT I'LL TAKE ONE ANYWAY

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CAR TESTS

Renault's luxurious 1904 Phaeton won the Paris Salon's gold medal. Can its new 18TS win glittering prizes, too?

Renault 18TS

Price £3801 On the road £3974

The hard truth of life in the car market is that the private buyer's only loyalty is to the pound in his pocket—witness the fact that more than half of all new cars sold in this country were built on foreign soil. Of the minority that do buy British, most of these are company-fleet buyers. And even these chauvinists are being pressured by hard-nosed firms' accountants to look abroad for replacements of last year's Ford Cortinas and Morris Marinas.

The dastardly foreigners are, of course, ready to step in—and none more so than Renault, eager to get a real grip on the lucrative pickings of the reps' car sector. The car with which it hopes to do this is its new 18—a conventional, booted saloon in two trim standards and two engine options, with a 'proper' estate car to follow.

Needless to say, the feet-on-the-ground good sense of 'straight' design, easy maintenance and rugged reliability that are the necessities of a fleet car should also appeal to the family man putting his own money on the line.

We put our money on the 18TS—the bigger-engined, more-modestly trimmed version. Would you be seen in this car?

How it goes

Although its 1647cc all-alloy engine is similar to that in Renault's 16TX and 20TL, it has a less-sophisticated head, so power—but not torque—is down by some 15%. One half expects performance to be compromised, too, and initial impressions tend to confirm this: most of our drivers were convinced that the speedometer was exaggerating—when it approached 60mph, it *felt* more like 50.

It wasn't until later that we discovered that the 18 is a master of understatement: the speedo is only 3mph fast at 60mph, and the acceleration is a lot brisker than it seems to be. Indeed, top-gear step-off from 30mph is brisker than any 12 or 16's we have tested, and all its obvious rivals, too.

Its deceptive effortlessness away from rest, revving eagerly through the gears to 6000rpm, likewise makes the 18's get-up-and-go more than a match for its market competition. Here, then, is a family car with more bite than bark. Its gear shift is competent, if not exactly keen to be hurried, with twangy imprecision confined to reverse selection only.

The 18 is not the sort of car that will have instant appeal on a quick trip round the block. To the newcomer, its straight-line stability

can seem uncertain and its steering vague and turgid. In fact, like the 12 before it, the 18 is all the better for more air in the front tyres—Renault recommends 23psi front/26psi rear, but we track-tested with 26psi all round and found nothing but good resulted. Response is quicker from straight-ahead, nose drift is curtailed, yet there is never a trace of tail-happiness with a normal load aboard. Of course, the 18 cannot corner with the vivacity of a small sports saloon—its suspension is too demure for such capers—but it will shrug off the excitement with aplomb and remain absolutely sure-footed, with roll sensibly contained.

In the final analysis, it's that stodgy steering that acts as a disincentive against pressing it too hard in the bends; like other Renaults, the 18 just doesn't encourage this sort of treatment.

How comfortable

The one thing that a Renault is expected to offer is something special in the way of comfort. The 18's rear axle can be felt at times, setting up a cushioned agitation over uneven surfaces, but, generally, it insulates occupants well, particularly over really rutted, broken roads. A complete absence of body fretting contributes a lot to the sense of well-

HOW GOOD

At-a-glance

DRIVE's verdict on the Renault 18TS, taking into consideration its rivals, its price and what kind of car it's *meant* to be

Out of five

PERFORMANCE

●●●●

FUEL ECONOMY

●●●●●

HANDLING/STEERING

●●

COMFORT/REFINEMENT

●●●

INTERIOR SPACE

●●

PASSENGER AIDS

●●

DRIVER AIDS

●●●

ACCIDENT/INJURY SAFEGUARDS

●●●

RUST RESISTANCE

●●●●

RUNNING RELIABILITY

●●●●

being, and open-road cruising is quiet—even refined at between 40 and 55mph. Engine and wind noises remain well controlled at any legal speed.

At the price, the 18's smooth, refined manners are difficult to match. It has the low-speed flexibility to pull from 20mph in top if required, with no complaints, limousine-style, and just a trace of half-throttle raggedness is evident at times, ameliorated on our car by enriching the mixture to still-legal limits. Starting and warm-up with the automatic choke was faultless.

Several Renault owners tried our 18TS, and all were impressed with the driving position and layout.

Pedals are straight ahead of the driver, with lots of room to rest a left foot beside the clutch, and the driving seat drew most praise from those who sat in it longest. The relationship between pedals, seat, wheel and gear shift is just right, and the only gripe from some people was a wish for longer column stalks.

Compared with conventional-saloon rivals, the 18's rear seat is comfortably shaped but hardly a match for a Ford Cortina in terms of sheer space. The wheelarches intrude—although the central tunnel doesn't—and the modest 96in wheelbase, inherited from the 12, puts it at a disadvantage for lanky passengers.

This was the main criticism from owners of 16s, who also couldn't appreciate that some people actually *prefer* an ordinary boot to a hatchback; as a sop to these faithful, it is possible to remove the rear-seat cushion very easily, but the exposed metal is not particularly flat for load-carrying.

Boot and glovebox lights are thoughtful standard items, but there are no courtesy switches on the rear doors. The boot is deep but has a high sill, and it lacks load length.

The heater was well up to our chilly test conditions, and reasonably controllable, too; but, when the weather turned warmer, we found that ventilation was marginal. It's not possible to alter the vertical deflection of cold air, and one outlet can't work without the other. Other irritations included cold draughts in the footwell even when the slide was set fully to 'screen', cooler air to the passenger's feet than that delivered to the driver, and no heat at all to rear passengers' feet. With its electric heating off, the rear window readily mists over—the rear extraction seems ineffective.

How strong

For over a year, now, Renaults have been covered by a five-year anti-rust warranty on the main structure, and current cars are protected with a thoroughness that is better than ever. The 18's



RENAULT 18TS

Front engine: 1647cc/4cyl, OHV (chain), one single-throat carb; 79bhp at 5500rpm
Front drive: 4 gears; 17.9mph/1000rpm
Suspension: front—ind wishbones, coil springs, anti-roll bar; rear—dead axle, coil springs, two links, A bracket, anti-roll bar
Steering: rack and pinion, 3½ turns/33½ft circle; 5B wheels, 155SR 13 radial
Brakes: servoed discs front/drums rear

Parts/repairs (inc VAT)
clutch £44.85 (fitting 5.2hr)
exhaust £46.05 (1.5hr)
headlamp unit £38.88 (0.5hr)
front bumper £25.60 (0.8hr)
laminated windscreen £58.86 (1hr)
oil filter and points £4.01–£8.10 (0.9hr)
major service 10,000 miles (2.6hr)

	per year	per mile
Running costs	£659	5.49p
Loss of value	£268	2.23p
Total depreciation	£817	6.81p
Insurance group	5	

THE RIVALS CLOCK IN

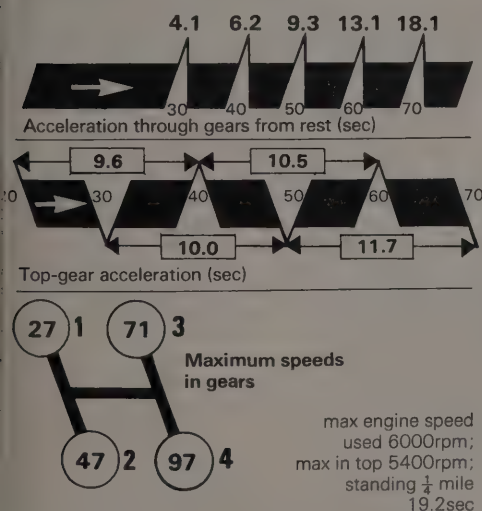
Toyota Carina 1600DL auto
Honda Accord 4-door
Morris Marina 1700HL
Peugeot 305SR
Vauxhall Cavalier 1600L

75 years on

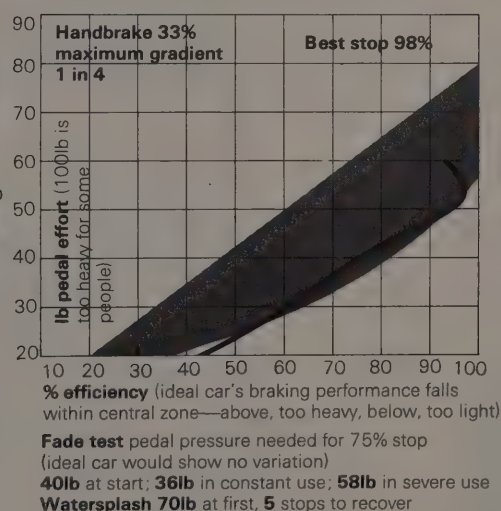


John Mason

PERFORMANCE



BRAKES—pedal pressures and responses



FUEL 4-star/97 octane min
overall consumption 35 $\frac{1}{2}$ mpg
effective tank range 365 miles/10 $\frac{1}{4}$ gal

Normal range of consumption

hard driving, heavy traffic	28mpg
short journey, suburban	29 $\frac{1}{2}$ mpg
motorway—70mph cruising	32 $\frac{3}{4}$ mpg
mixed roads—brisk, 50mph cruising	37mpg
quiet rural—40mph cruising	42 $\frac{1}{2}$ mpg

Consumption at steady speeds

30mph	55mpg
56mph	40 $\frac{1}{2}$ mpg
70mph	32 $\frac{3}{4}$ mpg
max mph	18 $\frac{1}{2}$ mpg

SAFETY CHECKS O= factory fitted option

steering: energy absorbing?	Yes	hazard warning: fitted?	Yes
front seats: secure mounts?	Yes	interior: well padded?	No
head restraint?	O	w/screen: laminated?	No
front belts: effective?	Yes	doors: crashproof?	Yes
convenient?	Yes	childproof?	Yes
rear belts: fitted?	No	petrol: spillproof?	Yes
		brakes: failsafe?	Yes
		load sensitive?	Yes

ON-ROAD PRICE (£)	CAPACITY (CC)	FUEL OVERALL (MPG)	MAXIMUM SPEED (MPH)	0-60MPH (SEC)	30-50MPH IN TOP (SEC)	BEST STOP (% g/lb)	OVERALL LENGTH (FT/IN)	MAXIMUM LEGROOM FRONT (IN)	TYPICAL LEGROOM REAR (IN)	STEERING TURNS/ CIRCLE (FT)
4002	1588	27 $\frac{1}{2}$	92	14.2	5.3 (k/d)	90/70	13' 9"	41 $\frac{1}{2}$	40	4/34 $\frac{1}{2}$
4240	1602	35	93	14.0	9.8 (4th)	88/40	14' 3"	40	37 $\frac{3}{4}$	3 $\frac{1}{2}$ /34 $\frac{1}{2}$
4114	1700	29 $\frac{1}{2}$	94	14.0	10.7	94/70	14' 0 $\frac{1}{2}$ "	38 $\frac{1}{2}$	39	3 $\frac{1}{2}$ /33 $\frac{1}{2}$
4124	1472	34 $\frac{1}{2}$	94	14.1	11.4	88/35	13' 10"	41 $\frac{3}{4}$	38 $\frac{1}{4}$	3 $\frac{1}{2}$ /32 $\frac{3}{4}$
3760	1584	29 $\frac{1}{2}$	96	12.6	11.3	97/50	14' 7"	40 $\frac{1}{2}$	37 $\frac{3}{4}$	4 $\frac{1}{2}$ /32

4th—4th gear

k/d—kickdown



With its roomy interior and lively power unit, the Renault 18TS made a favourable impression on our panel of amateur test drivers...

'It looked nice inside and out,' said antiques dealer Andrew Perry, 'right down to the quality of the carpets. The gear shift's action, however, was floppy, and the lever felt as though it were made of rubber. Between 35mph and 50mph it felt as if third gear was working too hard and fourth could not work hard enough, which made it a difficult car in town traffic. On the other hand, I was surprised at how fast it was on the open road: you think you are doing 40mph when you are really doing 65mph, so I really did motor... If I were in the saloon market I'd consider buying one.'

Housewife Claire Parker also liked the car's looks, and was even more impressed by its price: 'It's got to be good value,' she said. 'I certainly felt happy driving it. I took it down some very bumpy lanes and it felt very comfortable—typically Renault. Roadholding was good for the way I drive, and I didn't find the steering too heavy; much lighter than a Renault 5, for example. I found the instruments easy to read and I thought all the car's warning lamps were useful. I know I'd buy one if I were in the market as I'm not terribly keen on the rival Ford Cortina.'

'It gives the impression of being a big, roomy car,' agreed building consultant Fred Pocock. 'Bags of room, and nothing to trip over. I found the seats comfortable, and though the pedals were off-set they didn't make my legs ache. The gear change was quite good—I didn't notice anything strange about it. I thought all the warning lamps were rather a good idea; if something goes wrong, you would be sure to know about it. I also liked having two mirrors, and the way the heating and ventilation were kept separate was excellent. It moved as well as it looked, too—good even compared with my 3litre Ford Granada.'

Professional road-tester Peter Denayer comments: 'Contrary to the panel's impressions, the Renault has less rear legroom than the BMW, but its "comfort before all else" approach wins many buyers.'

floorpan is treated to a good coat of flexible pvc, while wax is injected into doors, box sections, sills and the like with commendable care. The outer sill surfaces receive a coat of brown Tectyl petroleum wax, and, apart from it not extending to the areas behind the rear wheels or into the wheelarch lips, we could find little to fault. Even the fuel tank's resiting in the boot means that it, too, is safe from corrosion—all very reassuring. Our only disappointment is that a pioneer of plastic bumper shields (on the Renault 5) has reverted to indifferently mounted chrome-plated ones on this newest model.

It is a virtue of the 18 that, beneath the skin, it shares so much with the 12—a model that has become a much-respected secondhand proposition. Sceptical fleet managers should be reassured by this front-wheel-drive configuration, with the 12's excellent reliability record to encourage them, too.

The speckled floor carpet is craftily contrived to look clean even when it's not, and, although the seat fabric could be trying if your shaggy dog is moulting, the rest of the trim is wipeable. It's a pity the screen-pillar and footwell trims get crinkled though—both cars that we saw suffered from this.

How safe

It's a big step up from accelerator to brake, but we are not among those who advocate level pedals at the cost of right-leg comfort. Once accustomed to the climb and to the somewhat-eager servo-assistance, the 18's brakes prove excellent in all normal conditions. A near-100%-efficiency stop comes at a sensible pedal load, and, though prolonged use in high speed provokes some fade, it doesn't get out of hand. Watersplash recovery is leisurely, too, but it's the lack of rear wheel grip that prevents the car from tackling a 1-in-3 downward gradient: the wheels, locked solid, just slide. In common with all Renaults, a load-sensitive rear valve means that the rear brakes always perform usefully—irrespective of what is in

the boot—without ever locking.

The 18's handling probably is as safe as you could wish for in a family car because its road grip and stability surpasses its willingness to be harried—you have to be as determined as a road tester to get into trouble.

Secondary safety is well catered for in the 18's basic structure—Renault has pioneered a lot of research into the effects of the crash from various angles, and the 18 seems very resistant to all of these and to roof collapse. Inside, we approve of the moulded headlining stuck to the roof and extending well forward across the screen rail—so often left unpadded. The front seats, however, do nothing to protect front occupants from those behind, and costs have relegated a laminated screen and front head restraints—standard on the GTL and GTS—to the TS options list. A wider-than-usual webbing prevents the seatbelts twisting and spreads the strain better in an emergency. Shorter drivers, however, felt they were too close to their necks.

How much

Perhaps the nicest surprise that the 18TS sprang on us was its miserly fuel consumption. The engine changes that we first viewed with suspicion are completely vindicated by results, for the car is as remarkably abstemious as it is deceptively quick. And the GTS, with its higher fifth gear, is likely to improve even on this, of course, giving a significant margin over the 30mpg that is still the norm for this type of medium-sized saloon. An 8mpg saving must be a terrible temptation to fleet buyers who normally stock up with Cortinas...

With a generous fuel tank that accepts all but the last $\frac{3}{4}$ gal easily, the 18 is the sort of car to get you there and back again, without the need for a fill-up.

With the fleet market in mind, Renault has tried hard to simplify maintenance and reduce dismantling costs for when things do go wrong. It's noticeable how many electrical units are uncluttered under the 18's bonnet—wiper

motor, regulator box and heater are all out on their own; only the alternator looks buried. The major 10,000-mile service is intended to be done Renault's way, with a diagnostic socket already provided; in fact, the job would be a piece of cake for any competent home mechanic, so long as he has a few special tools. Larger jobs are a different matter—parts prices still look costly alongside those of a Morris Marina, for example, and 5½ hours to change a clutch is long-winded.

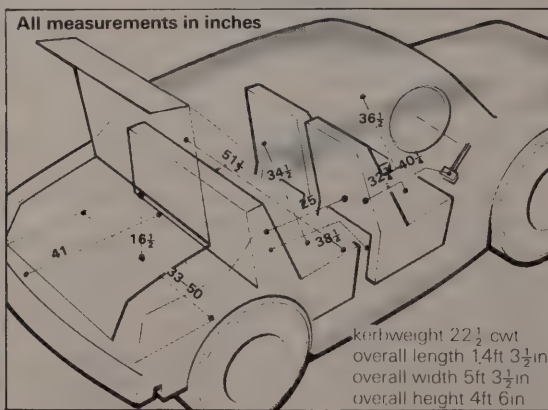
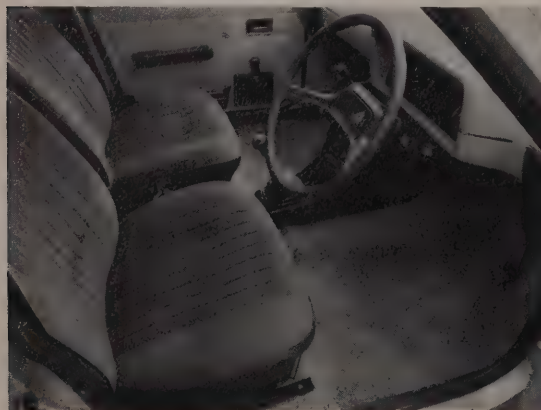
The handbook is helpful for smaller repairs, and its style and layout is even attractive.

We have based our depreciation on the 16TS, for we would expect the 18 to do at least as well. Of course, it seems likely that the 18TL will hold its value better, for, in nearly every respect, it is identically trimmed yet is £300 cheaper. The GTL and GTS have some attractive luxury items, lifting their equipment standard to a level that surpasses even a Ghia Ford in some respects (central locking, powered windows, five-speed gearbox on the 1647cc car). Currently, this luxury treatment adds £630 to the price of the car that we tested.

Verdict

In an era in which the demands of the fleet buyer have often resulted in spruced-up mediocrity, the 18 deserves to make headway. Its creators have made concessions to the company buyer, but the car retains that special something that makes a Renault *not quite* like anything else. The 18 should also please the beleaguered family man—so long as he can live with the limited rear-seat room and rather-ordinary boot. More concerned with giving you a comfortable ride than an exciting one, it is nevertheless deceptively quick, nice to tinker with, and, though spares may cost more, its fuel bills are going to be a lot less.

Just as vital, it is screwed together well enough to comfortably outlast its generous guarantee—surely the ultimate economy, whether it's your money or the firm's that pays the bills.





HOME MECHANIC

Fire1- the cause

If your car had been one of the many that went up in flames in 1977, would you have known how to deal with it? Better still, do you know how to *prevent* it happening?

Peter Alder, a 38-year-old freelance designer from Tewkesbury, Gloucestershire, didn't. He saw wisps of smoke rising from his bonnet, and when he got out to investigate there was a 'whoomph' as the engine caught fire.

'I managed to get the bonnet open and smother the flames with my jacket,' says Peter. 'My no-claims discount is worth more than my old Harris Tweed.' The bonnet was scorched, the fan wilted, and the camshaft drive-belt's cover distorted. The cause of the fire? 'A combination of a weeping fuel line and faulty wiring.'

It's a combination all too

familiar to organisations such as the Royal Society for the Prevention of Accidents. Their records show that almost 60% of vehicle fires are caused by the potentially lethal mixture of faulty electrics and fuel systems. In short car fires are caused usually by poor maintenance or ignorance.

One of the major causes of electrical fires is the incorrect wiring of accessories. The right cable to suit the current should always be used together with the appropriate fuse—and remember *never* to use a nail or a piece of wire to replace a blown fuse. That's asking for overheated wiring, which will almost certainly cause a fire. Where wires pass through holes in the metal bulkhead, they should be protected by rubber grommets to prevent chafing. Another point to remember is that, when fitting current-hungry driving lamps or airhorns, a relay switch should be used.

Seeping fuel-pipe unions, age-softened rubber connectors, leaking fuel pumps and faulty carburettors are all possible hazards, particularly if petrol can drip on to a hot exhaust system.

Other less-likely causes of fires are spanners left under the bonnet and shorting the battery terminals, cleaning rags dropping on to the exhaust, and carelessly discarded cigarette-ends. And did you hear about the man who

tried to free his frozen petrol cap with a lighter?

If the worst does happen and your second-most-valuable possession goes up in smoke, what do you do? Most fires start at the engine, and Alder was fortunate in smothering his fire quickly, as opening the bonnet can well let a ball of flame burst out. If the engine compartment is already well ablaze, *leave the bonnet shut*—having first made sure that the ignition is switched off. Because the petrol tank is well away from the engine the chances of an explosion are remote until the fire gets out of control, and the fire brigade should arrive before then.

If the fire is in its early stages and you decide to open the bonnet, there are several ways you can tackle the blaze. Smother it with a coat or a blanket or by scooping up and throwing on handfuls of earth or sand. Water, if you have any (try the wind-screen-washer reservoir), can be used *provided there is no petrol lying about under the car*—otherwise the flames may spread.

Obviously, none of these methods is wholly satisfactory. The real answer is always to carry a fire extinguisher. There are several different types on the market. DRIVE's Special Offer, the Paddy Hopkirk extinguisher, is of the quick-acting, dry-powder type that's particularly suitable for

vehicle and caravan fires because it won't short-circuit electrical components. It's also good for spilled-petrol fires, and it gives off no poisonous fumes. In addition, the powder is easily cleared away after the fire is out, and has no damaging effects.

The method of using a fire extinguisher is largely a matter of common sense. Most are used upright, but it always pays to memorise the instructions on purchase. Try to locate the source of the fire and, working the operating control, aim a flame-killing blast at the *base* of the flames to quench them as quickly as possible: Follow this with an overall spray, working with a side-to-side sweeping motion as the fire reduces, so damping down the outbreak.

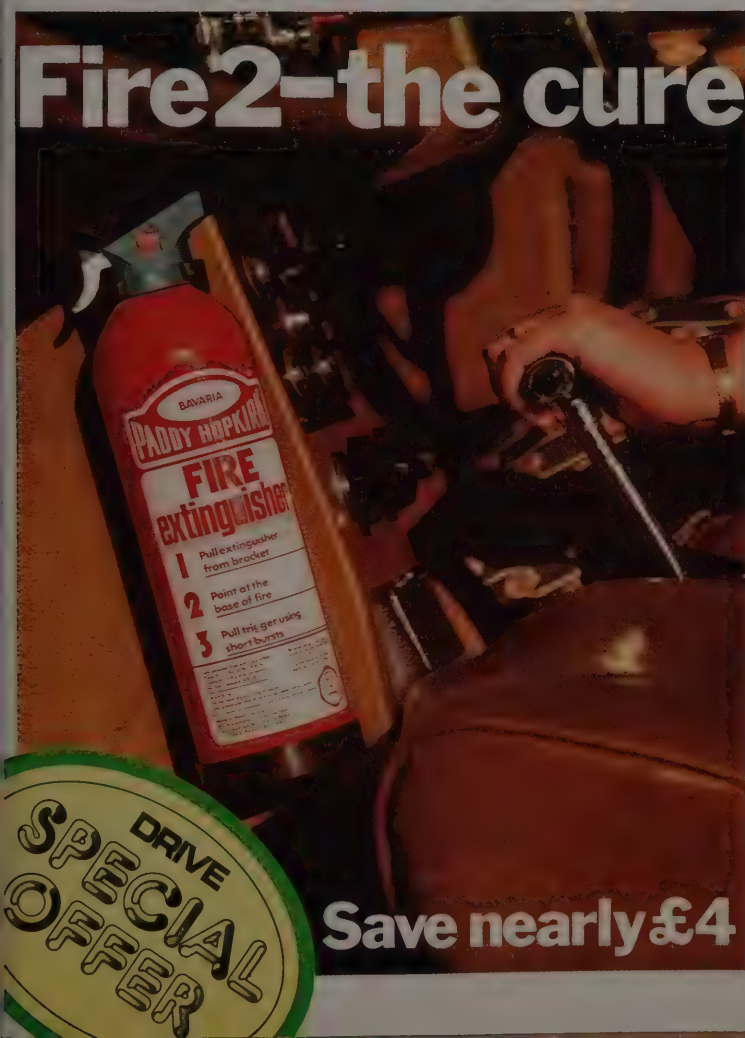
It is vital to remember that an extinguisher (which should, of course, be easily accessible at all times) is not a fit-and-forget item. It can deteriorate if it is not used for long periods and should, therefore, be serviced strictly according to the maker's original recommendations.

The cost of a fire extinguisher is a small price to pay for a big aid to peace of mind and an intact car. 'I always regarded car fires like other road accidents,' says Peter Alder—'they always happen to the other guy.'

He carries an extinguisher now.

BARRY FRANCIS

Fire2—the cure



CAR FIRES can't happen to you? Well, they can and do happen to 20,000 vehicle owners annually in Britain. That's a large insurance and repair bill which could be reduced if every driver carried an extinguisher.

The trouble is, few do. That's why fire brigades are called out to incidents involving more than 16,000 cars, nearly 3000 vans and almost 1000 motorcycles each year.

Make *certain* that it doesn't happen to you by investing £6.45 in DRIVE's Special Offer 1kg Paddy Hopkirk dry-powder fire extinguisher—that's a saving of almost £4 on the maker's suggested price. We selected it because it's earned the AA Seal of Approval, after exhaustive tests.

Drive, bike and caravan in safety by completing the coupon and sending it with a cheque or PO made payable to the AA. Offer closes 31 September 1979, and is available only to readers in Gt Britain and N Ireland.

DRIVE Fire Extinguisher Offer

NB You don't have to cut out this coupon, and if you don't please print *all* the same details in the same order on a plain sheet of paper or postcard

Name _____

(BLOCK CAPITALS, PLEASE)

Address _____

Enter AA membership number below, or write 'non-member'

890

Please send me _____ Paddy Hopkirk 1kg extinguisher(s) (ref 73846)

I enclose my cheque/postal order for £ _____

To: AA Mail Order Department, PO Box 50
Basingstoke, Hants RG21 2EA

PBM771

DRIVE
SPECIAL
OFFER

Save nearly £4

Great to be alive...?

MICHAEL IS 29. Up until September last year, he was a toolsetter in a Birmingham plastics factory. That was when he last rode his motorcycle. On his way to work, one morning, he was in a collision with a car and received serious head injuries. He was unconscious for six weeks. The accident has left Michael thin, anxious, crippled both physically and mentally—a pathetic shadow of the man that he once was.

His baby daughter Karen, born only two months before the accident, will never know what it is to have a fit and active father, but perhaps the tragedy is that his wife Sharon and their other child, nine-year-old Mark, will have known him as fit and active. If or when Michael does return home, he will need more care and affection than either of his children.

Kathy, a 20-year-old vicar's daughter from Worcestershire, drove a motorcycle for probably the last time in her life in the early hours of a May morning, last year. On her way home from a dance, she was riding along an unlit street, failed to spot a parked bus in time and hit it head on.

For three weeks, Kathy lay unconscious in an intensive-care unit. The impact broke her left thigh and damaged nerves at the back of her neck, paralysing one side of her body. When eventually she came to, she was unable to speak and had to be looked after like a baby.

Seven months went by before her speech came back, and even then it consisted more of grunts than recognisable words. Physical progress was just as slow. 'Kathy comes home', said the newspaper headline at Christmas, but it was a token visit, and she was soon back in hospital.

By the spring, Kathy had managed to write a letter to her parents—pathetically childish writing, but it was a start. She could just about feed herself, though so slowly that most of the food was cold long before she finished it. She still could not walk without being propped up: lying flat on her tummy, it was a major effort to roll herself over.

Severely disabling brain damage such as Kathy and Michael suffered is one of the worst—but by no means uncommon—legacies of a road accident. If an arm or a leg is broken, the chances are that it will mend and be forgotten. But if the brain is injured, the results are usually disastrous and often permanent.

The point is underlined by one of the country's leading authorities on road-accident casualties, Dr John Bull, of Birmingham Accident Hospital: 'Head injuries

are definitely the most harrowing, particularly when, as so often happens, they affect young people. There is an immediate change from a promising youngster to someone who is a very incapacitated invalid, little short of the vegetable state.

'We have to start with the equivalent of a very young child, teaching them all over again how to speak and how to walk. After a bit, we know they will never lead a normal life. They are a perpetual burden on their families, indeed often a cause of families breaking up.

'These cases are worse than people *born* with disabilities, because, then, the problem has been recognised from the start. But to grow up normally and suddenly be dropped back into this state is a terrible thing. The patience required by other members of the family is astonishing.'

Ironically, the problem has been made worse by improvements in brain surgery. As Barrie Brookes, formerly head of Birmingham Accident Hospital's rehabilitation unit, points out: 'It is reasonably easy now for a surgeon to save life. Twenty-five years ago, perhaps three out of five severe head injuries did not survive. Today, four out of five *do* survive, but one sometimes wonders whether they should, as the quality of life is so poor. There are some amazing recoveries, but you don't know this when you start, and you can find yourself persisting with cases that are simply no good.'

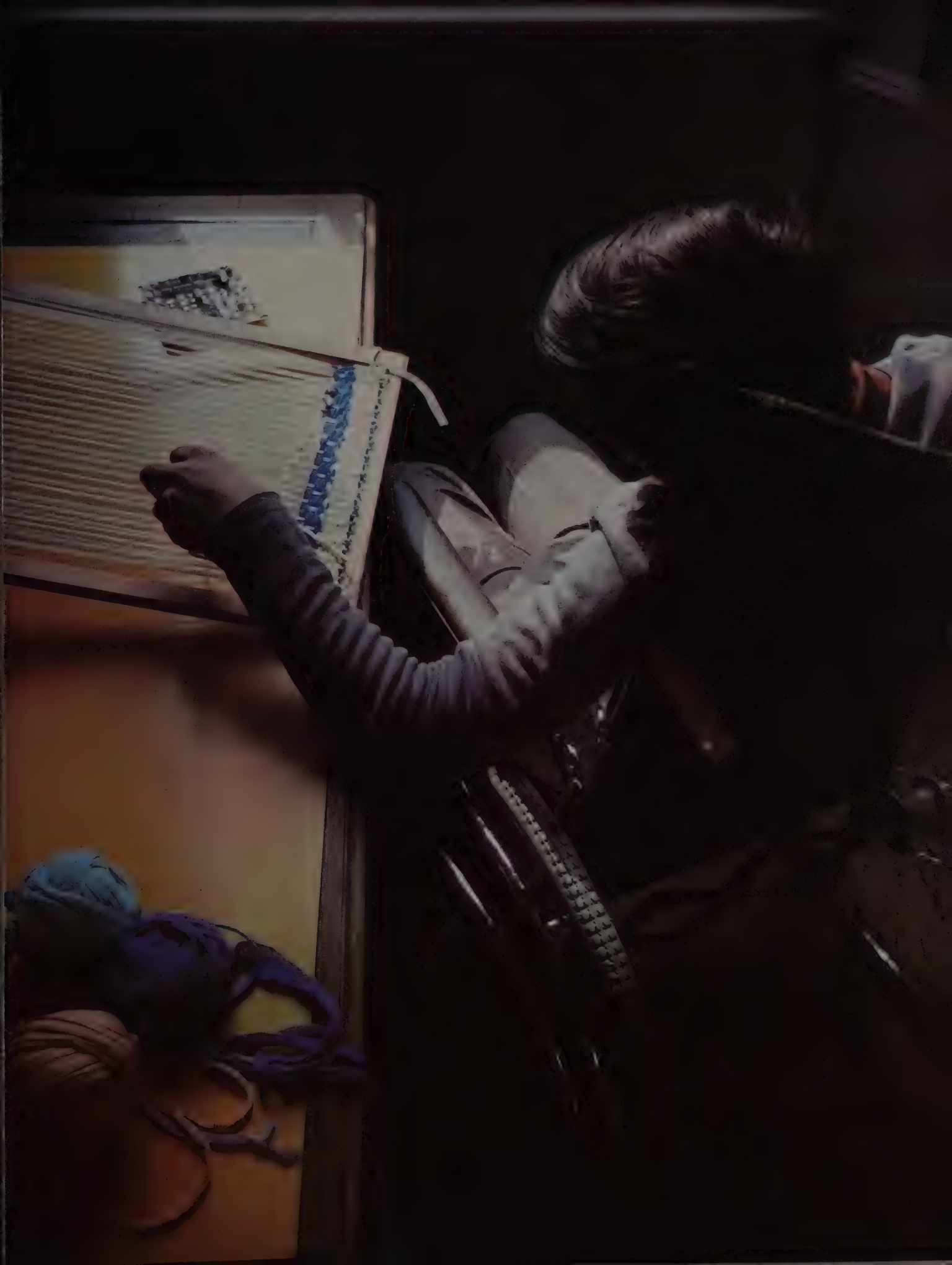
He stresses the destructive effect of personality change as a result of brain damage. 'A man may return to his wife after a long period in hospital, and he is not the man she married. His whole personality is different: he may be awkward, abusive and violent, to her and to the children. There was a man who objected when his wife went out shopping, even setting fire to the curtains as a protest. If she left the house, she had to make sure that a close friend stayed with him. A wife has to have a very profound love indeed to look after such a person, and it is not surprising that marriages break up under the strain.'

Treatment of head-injury cases requires infinite patience and often has to be tough to be kind. It may seem callous to the outsider, watching helpless cripples being shouted at and smacked like naughty children, but constant stimulation is vital if the patient is not to become a vegetable.

Mr Brookes explains: 'It is a matter of luck with head injuries which cells are damaged and which are not. In treating these people, we have to make use of what is left. We have to keep talking to patients who are virtually unconscious, and to get them back on their feet as soon as possible. We work on their sight, sense of smell,

Anthony Peigam

(continued on page 58)





Spit and polish

WHEN THE HELPFUL chap at Henlys, the Triumph dealers of Berkeley Square, London, encountered the lady with £3000 to spend on a new sports car, he tempted her with a Pageant-blue Triumph Spitfire at £3462. One hour later, Carole West, 33-year-old book-buyer from Hannington, Hants, signed a £3100 cheque for the hardtop Triumph—and that included £10-worth of numberplates, a £32 delivery charge, £5.25-worth of petrol—and a £50 road fund licence.

Carole collected the car—the first new one she has ever bought—and, 380 miles later, drove into an AA test centre to become the ninth reader-motorist in DRIVE's Long Term Test Club. While our experts measured, probed and roadtested the Spitfire to learn if it really was the bargain that Carole wanted, she admitted: 'I'd hoped to buy a foreign sports car such as the Fiat X1/9, but they were all too expensive. Dealers refused to talk about a discount for cash and, because of the haulage strike, they had few cars in stock anyway... I settled on the Spitfire because it's a compact

car with style. Other small cars like 2-plus-2 hatchbacks are a compromise, and I don't need more than two seats. Buying a Triumph also means that I have lots of dealers, and Supercar, to look after me.

'I really thought the Spitfire would be more spartan, but mine came complete with radio aerial, speakers and reclining seats, making it the most comfortable car I've ever had. I understand it would have been £100 cheaper with a soft-top, but I feel more secure with the metal one—and anyway, it still goes vroom...'

'I've noticed some faults already. The bonnet catches are loose, and the seatbelt warning lamp does not go out when it should. And I haven't got a tax-disc holder in my window, so I suppose I'm driving illegally. I don't know how long I will keep this car, but I expect that it will go when it really starts to give trouble.'

Judging by AA engineer Glyn Marrett's findings, the blue Spitfire had already started. Externally, Marrett noted that the weather strips on the lower window edges were insecure and misplaced,

causing wind noise. The bonnet catches were certainly loose, and he found a small dent in the near-side front wing. The left washer-jet was aimed too low, the boot's courtesy lamp didn't work, and Carole already knew about the faulty seatbelt warning; but, to add to the irritations, the speedo trip-reset cable was missing.

The engine's idling speed seemed too high at 1000rpm, but Marrett assured Carole that it was probably to compensate for some mechanical tightness while the engine was running-in.

Underbody, Marrett spotted an oil leak that seemed to be coming from the rear section of the sump gasket. Then, just as Carole was telling us how she loved the exhaust's sporty bellowing, our engineer discovered its cause: both exhaust joints were 'blowing', despite an attempt to cure the rear leak with sealant... Said Marrett: 'They obviously had problems with this car at the factory, and this fault should have been rectified during the dealer's pre-delivery inspection. I'd think that it could be sealed safely, but, however it's cured, it should be done promptly. Exhaust gases can

make a driver drowsy, and they could be sucked in through the open window—especially from the front joint's leak.

'The oil leak is merely disappointing—I would *not* expect to see such a leak on a new car. Carole would also be well advised to get the car rustproofed: the wax spray that's there now will seal it to some extent, but it's far from adequate in the long-term. So far, there doesn't seem to be any evidence of rust inside the chassis box-sections. Generally, I'd say the vehicle has been delivered in a reasonably satisfactory condition, but these points should be brought to the dealer's notice.

Carole added: 'As it's my first new car, I want to keep it rust-free. Now that I've been indoctrinated into the importance of rust-protection I'll get it Ziebarted. Most of my cars have gone to their final resting place because of rust. I remember my old Mini was full of holes, though its engine started every time.'

DRIVE will report again on Carole's car in a year's time, armed with the results of another five detailed engineer's inspections made in the coming months.

Calling all Spitfire pilots: if you have a car like Carole's, we'd like to hear from you. We're also interested in the experiences of owners of the other cars currently in our Long Term Test Club—Triumph's TR7, Volvo's 244DL—next issue's newcomer, the VW Golf diesel, and, reporting next time, the Toyota Celica XT2000. Got it? Then write—now!

Still perfect, Mr Potter?

TONY POTTER is accustomed to having to cope with changes. The one that most altered his life was 30 years ago: paralysed from the waist down by shrapnel during a naval action in south-east Asia, he was forced into civvy street and the tool-making business. Seven years ago, his employers went out of business, so Tony started his own company, and, today, his successful gauge-maintenance firm employs 28 and occupies a 4000sq ft factory in the Coleshill area of Birmingham, where Tony now lives.

Another turning point came 12 months ago, when Tony Potter bought his first foreign car—a Citroen CX2400. So impressed has he been with its performance and reliability that he says he will buy Citroen again when he changes the car next summer. 'But, for greater ease of access to my collapsible wheelchair,' says Tony, 'I will almost certainly go for the estate version.'

We'd like to think that his decision was helped by the car's final inspection at the close of his year as a DRIVE long-term test owner. In fact he had already made up his mind, and the verdict of AA engineer John Williams in the Citroen's last examination at the Association's West Bromwich Vehicle Test Centre merely backed Tony's decision.

The one unhappy aspect of Tony Potter's motoring year was that he only joined our test club through the failure of a BL dealer's salesman. 'My first intention was to buy a Jaguar XJ6,' he recalls. 'I had always bought British before, but the salesman was so off-putting that I turned my attention to the foreign opposition.'

'The difference in customer service was incredible. Volvo, for example, offered to redesign the boot to help the loading of my wheelchair. Datsun and Lancia, too, leaned over backwards in an attempt to meet my special requirements. In the end, I firmed-up on the Citroen because it needed no modifications to take my wheelchair. The local Citroen dealer, David Hiam, really impressed me. He opened the showroom up just for me one night, spent two hours showing me and my wife Audrey the car and offered me one to test-drive for the whole weekend.'

With two trips to the Continent,

three jaunts to Scotland and 12 months of business and social motoring behind him, Tony had chalked up 14,879 breakdown-free miles when DRIVE gave the Citroen its final check. As a measure of its dependability, the car has gone back to the dealer for non-standard servicing only four times since new. The first occasion, Tony admits, was his own fault: he had been told by the dealer of a hydraulic leak at the rear of the engine, but decided to take delivery before it was put right. It was repaired shortly afterwards. The other three visits were for trifles no more serious than a noisy speedometer cable and a couple of faulty fascia warning lamps.

Minor troubles unearthed at the first DRIVE inspection, a year ago, were a badly chipped balance weight on the offside front wheel, exhaust blow from the manifold, a loose weather strip on the nearside front window and slight engine retardation—all earmarked for the free first service.

However, an interim check after

7902 miles, last November, revealed that the wheel-balance weight was missing completely, and that the window seal on the offside front window this time was slack. In addition, oil was found to be seeping from the cam cover and fuel-pump gaskets.

In the final DRIVE inspection, carried out 1000 miles after the Citroen's last service, oil fouling was again evident around the cam cover, and the window seal still required attention. Other faults logged were: slight oil contamination on the left underside of the engine; minor rust on the leading edges of both rear wheel spats; heavy surface corrosion of the exhaust system; two fouled sparking plugs; and very rich engine running that required some carburettor adjustment.

Tony Potter was delighted: 'You can't grumble about a list like that after a year's trouble-free motoring—and the Citroen 2CV that my daughter, Maxine, bought at Christmas is proving just as reliable. All the more reason why I'm sticking with Citroen.'

The CXs in your lives

From the readers' letters we received giving experiences of Citroen CX ownership, DRIVE chose two that were sent by demanding, high-mileage owners

George Gath, Barwick in Elmet, Nr Leeds, W Yorks

Company director
CX2000 and CX2400

New: 1977 and 1979

Miles: average 17,000 annually

I bought first the 2000cc version—slightly underpowered on short runs and town work. I now have the 2400cc model, and this is certainly livelier.

Like me, my passengers have always been impressed with its smooth ride, comfort and space. The 2000 was best on long trips, and there was no feeling of fatigue—even after hours of motoring.

Despite my high annual mileage—I use my cars for business as well as pleasure—there have been no mechanical problems with either. On two occasions the 2400 has failed to start, both times when it had been parked with its nose into the wind, and had been standing several hours in driving rain. There have never been any delays due to the non-availability of parts.

Defects can be summed-up as: faulty door locks on delivery; a noisy speedometer cable (subsequently replaced); a faulty trafficator flasher unit (a new component last November).

Periodic replacements were: brake pads (15,000 miles); rear silencer unit (24,000 miles); and two drive belts.

Service and minor repair costs (April 1977–November 1978) were

costly. Total, up to and including the 30,000-mile service, was £367.27. Most expensive of these was the 24,000-mile service at £90.90, including the fitting of a new rear silencer (parts and labour), and the cost of replacement wiper blade, oil filter and six litres of oil.

Derek Green, Hartley Wintney, Hants

Antiques dealer
Citroen CX2400 estate

New: 1977

Bought: March 1978

Miles at purchase: 19,000

Miles now: 34,000

Niggles: single front wiper, fiddly screenwash jets, inefficient demister; lack of cold-air facility—it's open windows or boil; front ashtray and rear screen wiper switch difficult to reach; headlamps poor. Had to replace the front and rear brake pads three times, the clutch and tyres once, and various exhaust system parts.

My unhappiest experience was in March this year: the car was off the road for a month because engine-stay replacements were not available—at least, that is what the Citroen dealer told me. He subsequently discovered that they had been in stock all the time. To make matters worse, this was the only time that the dealer failed to supply a stop-gap car.

I'm not happy with the rust that's already appearing around the door handles, boot and wheel-arches, and a new rear bumper showed signs of corrosion within a month of fitting. But I do enjoy the marvellously comfortable ride—great for long journeys.



WHAT'S NEW

Paint your wagons

AT A COST OF £3million, Chrysler UK has recently become Britain's first motor manufacturer to install a **cationic electro-painting** plant of the type now widely operated in America and Japan.

With the established anionic method, a bodyshell being electro-painted in a tank becomes the anode on to which the paint is deposited. In the new system, the body becomes the cathode, and paint is attracted to it by reversing the electrical circuit.

Why the switch? International Paint, which manufactures and markets primer for the cationic system, claims a tougher finish with a better gloss, and cost-saving, thanks to a drastic reduction of time-in-the-tank and halved electricity consumption.

Experts have suggested that, compared to the anionic method, salt-spray performance can be four times better; and as corrosion resistance is superior, cationic paint can be half the film thickness yet still be equal in performance. The system also allows paint to reach recessed and critical rust areas that might not otherwise receive sufficient coating.

Chrysler claims that the protection given to partially-closed sections and the underside of vehicles—the most vulnerable to attack—is possibly more than three times greater than before.

International Paint is Britain's largest manufacturer of industrial paint and predicts that within three to four years most motor firms in the UK will 'go cationic'.

It's all too easy to suffer a near-miss in hazardous situations, such as overtaking and motorway merging, by failing to spot another vehicle obscured by the rear-quarter blind-spot. Mill Accessory Group's Paddy Hopkirk **blind-spot mirror** virtually eliminates this hidden area and widens hugely a driver's field of vision.

Measuring just 2in by 1½in, it is a simple convex reflecting surface mounted on a wedge-shaped base. It can be fixed instantly, by means of a self-adhesive strip, to all exterior mirrors, left- or right-hand mounted, leaving the greater part of the mirror clear for distance judging. Available from most accessory shops, £1.75 plus VAT.

CAR TESTS

If a patriotic buyer-on-a-budget wants a front-wheel drive hatchback, then he has only one choice . . .

Ford Fiesta 950L

Price £2789 On the road £2912

When BMC's Mini rocked the motoring world, a generation ago, one of its first customers was the Ford Motor Company. Ford engineers and cost-analysis experts inspected the mini-marvel bolt by bolt, stripped two samples down to their spot-welds . . . and then scratched their heads in bewilderment. They had discovered that, though the car's size was minute, its production-costs just didn't scale down in the same way. It was the watch and clock analogy—the watch being more expensive to make.

So, while BMC churned out mini-profit Minis, Ford went for the money-spinning Cortina. Its executives can look back on that decision with smug satisfaction.

Fifteen years later, other manufacturers did the same sums and came up with a different answer. By going for enormous sales, Fiat, Renault and Volkswagen decided that there was money to be made in the mini-car market—especially if the car was a super-mini.

The Dagenham giant thought again. One-in-five car buyers was looking for a mini with a hatchback, and Ford could satisfy them all by using its European operation as one giant Fiesta factory.

DRIVE tested one of the cheapest Fiestas to see if this money-spinner can please its buyer as much as it does Ford's banker.

How it goes

The smallest-engined Fiesta is available in low- and high-compression forms. Though the 957cc engine was derived from the Escort's, there's little for Ford fans to recognise in its all-new dimensions, inclined valves and shorter block.

Certainly, DRIVE's test car appeared to enjoy working hard, making it at least feel brisk, and the stopwatch proved that this smallest-engined Fiesta is not under-powered. With 45bhp pushed to the front wheels, 60mph came up from standstill in a class-average 18.4sec. Drivers in a hurry will need to row the car along on the gear lever, though, for top-gear acceleration times are pedestrian. Ambling from 30–50mph takes 14.7sec—a tardy time that's not due to over-gearing; flat out, the Fiesta will claw its way to an 83mph maximum—though, on the credit side, it does seem happy to stay there.

Ford has long had a reputation for slick gearboxes in normal north-south power units, but it is much harder to make an east-west gearbox that's smooth and easy. With a reputation at stake,

Ford tried harder, and some rear-wheel-drive cars are now put to shame by the Fiesta box's precision and lightness. It's silent, too, and free from the front-drive vice of vagueness. The clutch is similarly light to operate, but it does come in with a bang until you learn to tread carefully, and it won't manage a 1-in-3 hill.

Fiesta suspension uses familiar MacPherson struts at the front, but Ford has taken a leaf out of Volkswagen's book by incorporating negative-scrub geometry to stabilise the car while braking; the back employs a novel Ford design with coil springs and a tubular axle. It all adds up to faultless cornering manners and a tail that absolutely refuses to be wagged by clumsy mid-corner throttle work. When pushed extremely hard the nose just drifts gently wide of its intended course, and an extra tug on the wheel or release of throttle pressure is all it takes to resume a normal course. Even bumps encountered in mid-corner cannot upset this fail-safe package's handling.

The steering wheel may not quiver with excitement in an enthusiastic driver's hands, but this Fiesta does convey more feel of the road than do its archrivals from Volkswagen. It could be called a 'you-help-me-and-I'll-help-you' design, reassuring the

layman without exactly inciting him to wild cornering tactics.

The L-package Fiesta means a bare minimum of instrumentation—a speedometer (with no trip), fuel and temperature gauges. Between them sits a row of warning lamps for oil pressure, indicators, main beam and ignition. A handbrake warning lamp is fitted, but on the L version it isn't wired up. Ford tells us that newer Fiestas will have a brake-fluid-level warning lamp as standard—thanks to EEC regulations.

Three stalks and a choke clutter the steering column. The lefthand branch works lights, indicators and horn, while the pair on the right switch the lights and control the wipers. After pressing, pulling and twisting your way through this unhelpful collection, you eventually discover that the windscreen washer control is sited . . . beside your left foot. A centre console incorporates hard-to-find and stiff-to-operate rocker switches for hazard flashers, heater fan, rear screen wash-wipe (now standard on Fiesta Ls) and the heated rear screen; smokers get an ashtray but no lighter. It's a less spartan package than many on the market, and represents reasonable value when niceties such as halogen headlamps, door mirror and reversing lamps are thrown in as standard.

How comfortable

'Not very' is the quick answer—especially when only one person is on board. The ride can be fidgety at times—the price, we'd guess, that Ford decided should be paid for such good handling manners—but we can think of some budget-price cars that allow you to have your cake and eat it. In general, we reckon the ride is no better than the Escort's.

Among our test team, only the shorter variety complained about the Fiesta's driving position; they finished up too close to the steering wheel. The rest of us liked the relationship between seating and controls. Our L-trim seats were covered in a rather dated-looking houndstooth-check cloth and, though the front seats offer nine fore-and-aft positions and a five-position backrest, they were failed by some testers for a lack of support in the right places: the cushions are too soft and there isn't enough lumbar thrust. It's a pity, because the Fiesta certainly has more legroom and knee-room than its rivals—much roomier, for example, than a Renault 5. Rear seat space is adequate for two adults, and three could squeeze in, but the tape measure proves that passengers have been given priority over parcels.

Even allowing for the under-floor compartment beside the spare wheel, luggage space behind the rear seat is cramped. The full-

School



FORD FIESTA 950L

Front engine: high-compression 957cc/4cyl. OHV (chain); one multi-jet sonic idle carb; 45bhp at 6000rpm
Front drive: 4 gears; 14.4mph/1000rpm
Suspension: front—ind MacPherson struts, coil springs; rear—dead axle with trailing arms, Panhard rod
Steering: rack and pinion, 3½ turns/31½ft circle; 4J wheels, 135SR 12 radials
Brakes: discs front/drums rear

Parts/repairs (inc VAT)
clutch £29.22 (fitting 2.7hr)
exhaust £16.87 (0.5hr)
headlamp unit £20.12 (0.3hr)
front bumper £15.56 (0.3hr)
laminated windscreen £28.07 (1.1hr)

oil filter and points £4.00 (0.6hr)
major service 6000 miles (2.2hr)

	per year	per mile
Running costs	£474	3.9p
Loss of value	£52	0.43p
Total depreciation	£443	3.69p
Insurance group	1	

THE RIVALS CLOCK IN

Fiat 127 1050CL

Peugeot 104GL

VW Polo N 900

Renault 5TL

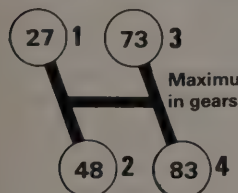
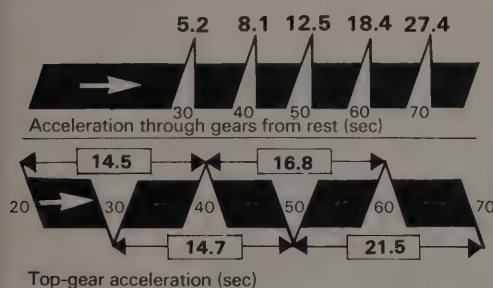
Mini Clubman estate

bus



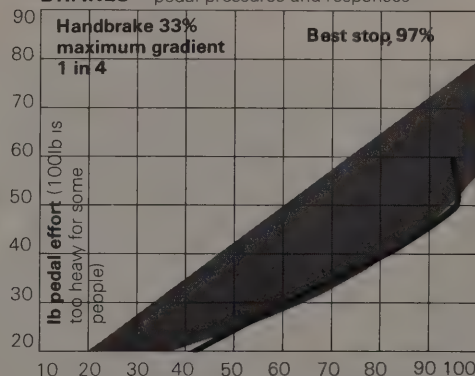
John Mason

PERFORMANCE



max engine speed used 6600rpm;
max in top 5450rpm;
standing $\frac{1}{4}$ mile 21.2sec

BRAKES—pedal pressures and responses



FUEL 4-star/97 octane min overall consumption 41mpg effective tank range 270 miles/6 $\frac{1}{2}$ gal

Normal range of consumption

short journey, suburban	33mpg
hard driving, heavy traffic	34 $\frac{1}{2}$ mpg
motorway—70mph cruising	36 $\frac{1}{2}$ mpg
mixed roads—brisk, 50mph cruising	41mpg
quiet rural—40mph cruising	49 $\frac{1}{2}$ mpg

Consumption at steady speeds

30mph	60mpg
56mph	46 $\frac{1}{2}$ mpg
70mph	36 $\frac{1}{2}$ mpg
max mph	28 $\frac{1}{2}$ mpg

SAFETY CHECKS O= factory fitted option

steering: energy absorbing?	Yes	hazard warning: fitted?	Yes
front seats: secure mounts?	Yes	interior: well padded?	No
head restraint?	No	w/screen: laminated?	O
front belts: effective?	Yes	doors: crashproof?	Yes
convenient?	Yes	childproof?	Yes
rear belts: fitted?	No	petrol: spillproof?	Yes
		brakes: failsafe?	Yes
		load sensitive?	No

ON-ROAD PRICE (£)	CAPACITY (CC)	FUEL OVERALL (MPG)	MAXIMUM SPEED (MPH)	0-60MPH (SEC)	30-50MPH IN TOP (SEC)	BEST STOP (% g/lb)	OVERALL LENGTH (FT/IN)	MAXIMUM LEGROOM FRONT (IN)	TYPICAL LEGROOM REAR (IN)	STEERING TURNS/ CIRCLE (FT)
2870	1049	39 $\frac{1}{2}$	84	16.4	13.8	92/80	11' 11 $\frac{1}{2}$ "	37	38 $\frac{1}{2}$	3 $\frac{1}{2}$ /32
2774	954	36	83	19.9	14.7	88/60	11' 9"	39 $\frac{1}{2}$	35 $\frac{1}{2}$	3 $\frac{1}{2}$ /31 $\frac{1}{2}$
2790	895	39 $\frac{1}{2}$	81	19.0	13.6	96/70	11' 6"	40 $\frac{1}{2}$	37	3 $\frac{1}{2}$ /30 $\frac{1}{2}$
2742	956	42	82	19.7	13.0	92/85	11' 6"	39	34 $\frac{1}{2}$	3 $\frac{1}{2}$ /32 $\frac{1}{2}$
3012	1098	40 $\frac{1}{2}$	82	18.2	11.0	92/70	10' 4 $\frac{1}{2}$ "	39 $\frac{1}{2}$	34 $\frac{1}{2}$	2 $\frac{1}{2}$ /30

4th—4th gear

k/d—kickdown



depth tailgate is useful when heavy items are being loaded, and folding the rear seat over extends the load-length to a respectable 50in. There is plenty of space inside for oddments and maps, but no lockable box for valuables.

Fiesta heating is disappointing at lower heat settings, cooking the driver's toes while leaving the front seat passenger, not to mention those in the back, out in the cold. A well-misted interior takes too long to clear, even when the two-speed blower is working flat out, but the heated rear screen is welcome.

Your verdict on the 950L's running refinement will depend on the sort of a driver you are. In town, the late-but-sudden clutch makes it difficult to be a smoothy, though the small engine will pull happily in top gear from below 20mph. At just under 60mph, there's an intrusive booming from the engine, but drive it hard and the noise barrier's broken before it's been noticed. With wind and road noise so well subdued, the 950L is then a very impressive small car, with creaks and rattles confined to a noise from the passenger-door trim—a fault we found on the last Fiesta we tested.

How strong

Our expert with the all-seeing endoscope probe was critical: 'No apparent attempt has been made to rustproof this car thoroughly, and rust has already found a home in the sill box-sections and where front longitudinal members join

the floorpan.' We also found the 'red rotter' round the rear suspension springs' turrets, under the floorpan and along the fuel-tank's seam weld: the 6000-mile-old car was already rusty. Ford confines rust protection to the wheelarches (where prospective purchasers just might look), but even there the wheelarch lips were bare.

Our test car had been repainted after accident damage, but we noted several paint nibs and imperfections in the original metallic-red covering. The tailgate aperture was poorly finished, and preparation marks were visible through the top coat in several places.

As for mechanical reliability, Ford seems to have got its front-wheel-drive system right first time. Long-term owners are more likely to be let down first by the sheet metal that surrounds the engine...

How safe

Water is the only thing that worries the braking system—our car took six stops to recover from a wheel-soaking splash. We managed a best stop of 97% at a lightish 50lb pressure.

Handling is as safe as can be, but should the crunch come we'd worry about the lack of padding on roof edges—particularly under the visors. We also disliked the threatening knee-level position of the choke control and fuse box... a little more thought from Ford would make us happier. A standard laminated screen would help, too—customer demand is needed

to speed the introduction of this safety feature.

How much

Fiesta owners certainly enjoy the cheapest super-mini on the market—and we don't just mean its price-tag. Insurance-company engineers helped to design a body that was easy and cheap to repair, and the reward is an unbeatable Group 1 insurance rating.

Servicing's helped by braking and clutch systems that are self-adjusting, and the clutch can be removed without dropping the engine. After that, Ford identified 100 of the most common repair operations, and cut 75 of them to less than one hour each. A special depth gauge was devised for the front brake pads so that dealers could check for wear without removing a wheel, and there's no need to strip the wheel hub or bleed the brakes when changing a front disc.

With an overall consumption of 41mpg, the Fiesta 950L won't make a hole in anyone's pocket, and an ultra-careful driver on a Sunday potter might just make 50mpg. Driven hard, it still returns a remarkable 34½mpg, and flat-out on the test track saw a creditable 28½mpg. The tank offers 270 miles between fill-ups and around 2000 miles for a pint of oil.

Verdict

Ford's late entry into the hatchback market has given it unbeatable hindsight: Britons now buy more Fiestas than the sum of all its rivals. The 950L is certainly a game little car, with no real performance and packaging rivals on the home market as yet, but we can recommend it to the man who likes performance with economy as a short-term investment only. For while Ford talks about rust protection, foreign hatchback makers are actually getting on with the job.

Of course, long-term owners could always drive straight from the dealer to the nearest commercial rust-proofing business and pay another £80-£100—but for that extra sum the rust-conscious buyer could afford to start looking at overseas rivals.



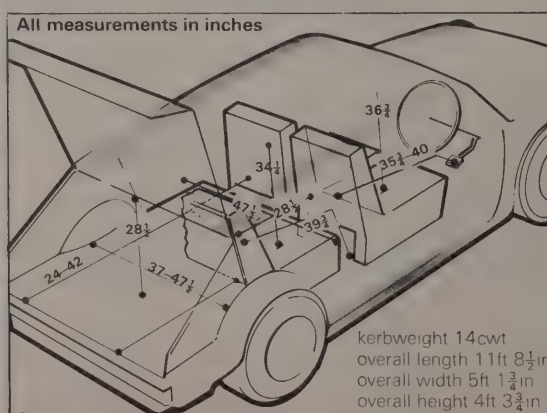
Before the Fiesta was launched in the UK, Ford asked 11,000 people what they expected of a small car. DRIVE asked three more... its Everyman panellists.

'I liked it,' declared Ford fan Fred Pocock. 'The pedals were perfect for me, the steering was positive—apart from the slippery wheel-rim covering—and the roadholding was excellent. It was quite nippy, and even in fourth gear I could plod through villages without having to change down. I was very surprised to be told it was under 1000cc—I thought it'd be an 1100, at least. The facia may be plain, but the flip-type switches are practical and you don't have to stretch to reach them. There's bags of room for luggage, and pockets and shelves everywhere, but why don't they recess the door pockets and make them even bigger?'

'I thought the Fiesta was well-finished, inside and out,' said Claire Parker. 'I liked the hatchback conversion, even though the shelf was supported by a pair of boot-laces, and the standard heated rear-screen and its wash/wipe are a bonus. I found it comfortable, and I'd happily motor a long way in it, despite irritating rattles and a funny buzzing at 70mph on the motorway. The driving position and controls are convenient, and the gearbox was typically slick Ford. Ride and roadholding were good, and at first I thought the car was nippy, but on reflection it just gave the impression of being fast.'

'The hatchback makes it an ideal first-time-buyer's car,' said Andrew Perry. 'Because of the luggage screen, it's like having a proper boot as well. Though I liked the paintwork, the rest of the car was a bit tinny, like an empty biscuit tin. While the ride was bouncy, the roadholding was good. I thought the steering wheel's nasty, slippery plastic very uninviting—and the windscreen washer button on the floor was archaic. Nice, though, to see radial-ply tyres and reversing lamps in this price bracket. It's nippy and it pleased me.'

DRIVE car-tester Peter Denayer comments: 'If Fred recessed the door pockets, they'd get in the way of the window winders. Andrew's "tinny" comment was provoked by details—I'm sure it's much sturdier than he thinks.'



As reliable as



As advanced as



The amazing



Take away the built-in computer. The digital read out. The automatic tuner.

And you're left with one of those reliable Hitachi car stereos.

The kind that last longer than most cars.

Naturally the Digital 1 has the NC noise limiting circuit for interference-free reception.

And it has the superior cassette system you find in all Hitachi car cassette players.

It has separate on/off and eject controls, to take care of your precious tapes.

And you don't have to keep your finger on the fast forward or rewind buttons. (Some manufacturers cut corners, Hitachi know you have to drive round them.)

The Hitachi Digital 1. The only thing it's not designed to do is break down.



HITACHI
Hitachi, in a word reliability.

IF THE OUTSIDE MAKE THE INSIDE WILL LE



You could call it a sports car.
It's one of the quickest off the mark and one of the fastest in its class.

It has rack and pinion steering, offset suspension and front and rear stabilisers. So it has the handling and feel of a sports car.

You could call it a touring car.

It has comfortable, long distance seats and fully adjustable headrests that were designed to fit people first, cars second.

It has a wind-tunnel tested shape – which makes rain gutters unnecessary – for noise free, high-speed cruising.

And it has a three way, electrically operated sun roof (closed, glass-screened, open) so you can enjoy all the weather going.

You could call it a town car.

It has an all round bumper for those close encounters.

It has side window demisting and a

S YOUR MOUTH WATER. AVE YOU SPEECHLESS.



unique, full instrumentation panel which includes a specially designed radio, combined speedo/rev counter and a maintenance display that tells all at a glance. Even which door isn't shut properly.

It sips two star petrol, come what may.

And it's built with the same superb finish and tough reliability that's made the Civic and Accord such highly praised cars throughout the world.

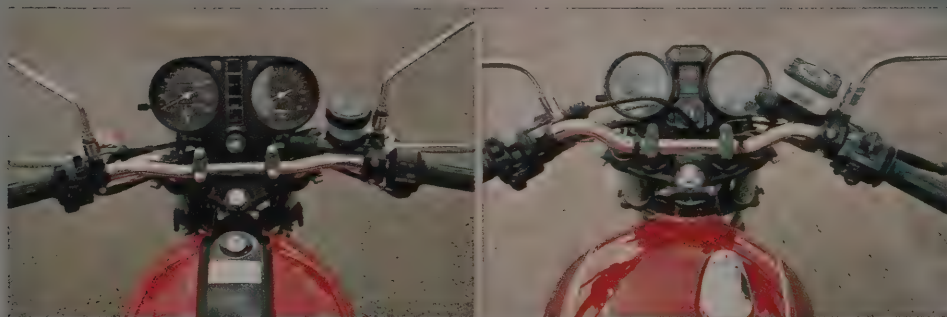
The new Honda Prelude 2+2. Whichever way you look at it, it's a mouthwatering car.

THE NEW HONDA PRELUDE 2+2

ENGINEERING AT ITS BEAUTIFUL BEST

FOR FURTHER DETAILS CONTACT YOUR LOCAL HONDA DEALER: RECOMMENDED RETAIL PRICE INC. CAR TAX; VAT; AND SEAT BELTS FROM £4750.

Cruiser class



IF YOU HAVE started to think about big bikes, you are past economic reasoning: large motorcycles, like large cars, cost large amounts of money—to buy and to maintain. Despite this, there is a rapidly growing section of the road-using public beginning to appreciate the practical advantages of large-capacity bikes.

Of all the large-sized motorcycles, none are more practical than the 750s—cruiserweights of the bike world, providing much of the punch of their even-bigger brothers but without their burden of excessive bulk and weight.

We put a couple of mainstream models through their paces: Yamaha's XS750, generally regarded as a 'Japanese BMW', and Suzuki's GS750, a latter-day Triumph Bonneville.

Suzuki GS750EC

Price £1549

CREDIT WHERE it's due: it was Honda that, 11 years ago, set the motorcycling world running after its own tail when it gave us everyman's 750 fantasy—an ohc transverse-four engine, five gears, electric starting, disc brakes, and an exhaust note that curled strong men's spines—at a reasonable price. It set a pattern to which almost every other maker has since gladly subscribed.

The most recent is Suzuki—refugee from the two-stroke camp virtually abandoned by rivals Yamaha and Kawasaki. Its GS750 is currently heading the sports-roadster popularity polls—and with good reason.

A few years ago, Japan suddenly awoke to the fact that it was in danger of losing a large chunk of its world market to an Italian industry that was offering bike frames stiffer and more stable than Japan's. Disregarding other considerations, Suzuki built an immensely strong frame for its new fours, and then equipped it with some of the finest suspension ever to grace a motorcycle. The result is a GS750 that will sweep through long, fast curves with the equanimity of an inter-city express, or dive around as sure-footedly as a lurcher after a hare.

Power delivery is deceptive, purring along smoothly at 2000 rpm in top gear (29 mph)—but cutting dead at any attempt to snap open the throttles. It is a characteristic that remains up to 3750rpm, although useful acceleration is simply induced by a more-progressive movement of the twistgrip. Once past this mark, the engine begins to get into its stride, but, by this time, high-frequency vibration begins to resonate through the dual seat particularly—infuriating, because it continues into the 4800rpm that produces a motorway 70mph.

At 6000rpm, the Suzuki changes from contented cat to savage

tiger, and arm-wrenching acceleration sets in all the way to a heady 9000rpm limit. This is where the machine really belongs—vibration has reduced to a comfortable level, the once-soft, luxury suspension has taken on the roll of a sure-footed racer, and the brakes, which at modest speeds lack vital 'feel' and seem spongy, become sensitive, positive and powerful. While the Suzuki's lack of low-speed power reduces its top-gear 30–50mph spurts to below that of the beefier Yamaha, at the top end of the speed range it will outpace the XS750 with contemptuous ease.

At its performance limits around a closed circuit, incorporating simulated winding-road conditions (accelerating to 9000rpm through all gears and continually braking hard), an average 67mph returns a remarkably good 36mpg. However, 58mpg was the very best possible figure recorded.

The frame, suspension, and engine performance of the sporting GS750 are without question equal to the finest around, but the rest of the machine suggests it has been finished in a rush. The riding position, with its uncomfortably high-mounted handlebars and forward-placed footrests, is hardly sporting—the dual seat is exceptionally comfortable, though. Instrumentation is among the best there is, offering total accuracy throughout the entire performance range and illuminated by modern, dim-orange lighting.

Final drive is by rear chain; unlike most chain drives, this one does not appear to wear, and our test machine required no adjustment from beginning to end. This is the result of a typical piece of Japanese problem-solving: rather than tackling the cause of chain wear, Suzuki has eradicated the effect with a chain using grease-sealed rollers—a clever technical side-step that solves all... well, almost all. Replacement chains cost almost £42 each, but they appear to offer a life approximately three times that of an orthodox counterpart.

For the sporting rider, few motorcycles can provide the high-speed

HOW THEY MEASURE UP	SUZUKI GS750EC	YAMAHA XS750
Engine	Air-cooled dohc 4-stroke four 68bhp at 8500rpm	Air-cooled dohc 4-stroke three 68bhp at 8000rpm
output		
Transmission	5-speed, exposed, grease-sealed chain	5-speed shaft drive
Kerbweight	552lb	575lb
seat height	31in	31½in
max width	34½in (handlebars)	31in (handlebars)
max length	87½in	86in
Fuel tank	3gal/15.1 miles plus 7pt reserve	5gal/28.0 miles plus 5pt reserve
Mpg—overall	45	55
quiet use	58	69
suburban use	40.5	46
brisk use	49	55
hard use	36	39.5
Performance —max (upright)	110mph	105mph
0–50mph	4.7sec	5.8sec
30–50mph (top gear)	6.1sec	4.9sec
Warranty	6 months/10,000 miles parts and labour	6 months 10,000 miles parts and labour

safety or efficiency of the Suzuki GS750, as production-racing events around the world are proving. The ironical thing is that, while equaling or bettering Italian frame and suspension standards, Suzuki has fallen into the trap of ignoring the vital secondary qualities that would crown its triumph.

Yamaha XS750

Price £1790

TWO ANNOYING features of long-distance motorcycling are frequent refuelling stops and rear-chain maintenance. Smirking BMW owners may scoff that *their* machines are designed to avoid such irritations, but not everyone likes flat-twins. Yamaha appreciates this, so, two years ago, it built its own cruiser-weight fast-tourer, complete with shaft drive. The third series of the line now comes complete with a 5.5gal petrol tank, as well.

Oh, the joy of knocking up 126 miles before morning coffee, then turning round and zipping another 151 miles into London for a lunch appointment, all without refuelling, using a motorway, or suffering any parking problems!

Shortly after the XS750 was launched, the model's reputation suffered from unreliability. A pity, because improved seals, bearings, oil pump, combustion chambers, pistons, primary transmission, clutch, valve timing and engine-component material, as well as the adoption of electronic ignition, have turned the machine into an *extraordinarily* good motorcycle.

Not even the best bikes are perfect, however, and, unlike the Suzuki, the XS750 complies with the traditional Japanese performance-trait of vague high-speed stability. But it is by no means dangerous, simply unsettling, and arises only during ultra-fast cornering, breaking through motorway-lorry 'bow waves', or riding over bad roads. Changing from the original Japanese tyres to a European brand offering directional stability should rectify the problem.

The only other noteworthy faults are an excessive backlash in the transmission, and its

inadequate shock absorber; combined, they cause a jerky throttle response at low speeds. The excess of clinker in the frame's welds is only a showroom fault, but poor, nevertheless.

At a kerbweight of 575lb, the bike is heavier than it should be, although classic styling, a compact riding position and taut handling largely counteract this. Rider comfort is achieved by the ideal compromise—placing the rider in a sporty-enough position for him literally to lean on the wind at high speed, but not so sporty that his arms will ache from having to hold himself up through town.

One of the strong points of the engine is the manner in which it lashes out oodles of meaty torque at low engine speeds. Strong top-gear acceleration is on tap from as low as 30mph (2000rpm). Up to 3000rpm, some vibration growls out as well, but this quickly disappears, leaving a near-turbine-smooth power delivery through the rest of the speed range.

Gear changing is excellent, spoiled only by a mild, BMW-like 'clonk' on the move from bottom to second gear—probably due to the wide gap between the two ratios. This, in turn, is a result of Yamaha's wise decision to locate the four upper-gear ratios close together to improve open-road performance. Bottom gear is nothing more than a rush-hour crawler.

A big bike requires big brakes, and the XS750's are *exceptionally* good—not because they are necessarily more powerful than others, but because Yamaha has opted for a system that demands a deliberately hard squeeze to stop quickly; so much safer than the vogue for the featherlight application of monstrous braking power.

The same philosophy is apparent in the other controls: the most important—dipswitch and *self-cancelling* indicators—are activated in the most-natural yet distinctive manner by simple movements of the left thumb on hefty toggles, and all other switches are equally well designed. Night riding behind the powerful, well-angled beam of the 60/55w quartz-halogen headlamp is a pleasure.

Unlike many Japanese machines, the XS750 does not impress in the showroom half as much as it does after a couple of weeks on the road. It has its bad points, such as the appalling frame welds, uncleaned of 'clinker', but, in the main, it's a motorcycle that grows on one.

More than blandly efficient; more, even, than wholly practical... the XS750 offers its rider a charming and admirable character, as well.

DAVE MINTON

CAR TESTS

If you have to ask the price, as they say, you can't afford it. But is the mini-Mercedes *worth* all those unmentionables?

Mercedes-Benz 280E

Price £11,599 On the road £11,694

To Daimler-Benz, car-making is a sober business. Regarding itself as the father of petrol-powered motoring, the German giant's concern for its fast-moving offspring verges on the paternal. Car quality and safety are an obligation, not an option—an unspectacular approach that has nevertheless earned an ardent, global following among taxi drivers, fleet-car buyers and heads of state, all united in their appreciation of engineering excellence.

DRIVE decided to test D-B's good intentions to the limit with the Mercedes-Benz 280E, which sports the biggest engine that can be shoe-horned into M-B's 'small' saloon body—plus fuel injection. Despite the auto-only transmission, it promised to be a truly *schnell* motor...

How it goes

While most six-cylinder engines deliver a smooth flow of power at low speeds for lazy, top-gear driving, this Merc's made of sterner stuff. The 2½litre twin-cam unit develops its maximum torque at an unusually high 4500rpm, and surges on to its 6500rpm ignition cut-off point with the howl of a jet engine—and acceleration times to match.

Apart from depressing the accelerator fully once, cold starts are automatically controlled by a fuel injection system that makes the warm-up period trouble-free. The gear selector slips easily into D, and the mini-Merc pulls away smoothly—though with an apparent lack of enthusiasm.

To extract its best performance, the auto-joystick has to be used as a manual shift, for D makes use of only the three upper gears in the four-speed box to provide smooth, nonchalant progress: stamping the accelerator into the carpet gives an early change-up from 2 to 3 at 41mph, and a 3-4 shift at 81mph. It *feels* casual, but the stopwatch proves that it's sufficient to beat rivals such as the Jaguar XJ6 3.4. DRIVE tried manually delaying each change until maximum revs, which knocked 1.2sec off D's 0-60mph to give the sparkling acceleration times seen in the table opposite.

It's all done by the unusual S and L settings on the auto transmission—abbreviations, we'd guess, for Swifter and Let's Go!—which can transform the Mercedes' D-for-docile mood. S uses only the three lowest gears, and delays change-ups, too, to give ferocious acceleration around town and on motorway slip-roads, while L punches the power

through gears 1 and 2 only. Full-throttle in S, for example, gives a potent downshift to 2 at any speed up to 42mph—in contrast to D's attempt to pull in 3 from 30mph upwards.

It sounds like unnecessary work for the driver's left arm, but this odd box does offer the choice of lively performance on half-throttle for those afraid to pound the accelerator pedal, or, for more sporting types, acceleration that can see-off all but one of the rivals in our tables.

Exciting test-track performance would be of academic interest only, were it not for Mercedes' skill in taming the 280E for everyday use. During hard cornering it remains docile until the point of no return, when the grippy front tyres ultimately steer wide, towards the outside of the bend. The Mercedes' rear end will attempt to overtake its front when a panic-stricken driver lifts off the accelerator in response to a front-end cornering slide, but even then the 280E allows time to be reined in—unlike the rival Jaguar. In all other situations the mini-Merc's roadholding is tenacious and well up to rushing round tortuous B roads in dignified haste.

Only the steering fails to match the same excellence. It's a recirculating-ball mechanism that,

combined with an unusually large-diameter wheel, produces an inch or so of free play that's unhelpfully disguised by the power assistance. The results are that minor course corrections are difficult to apply accurately, the bulky car seems tricky to aim through corners, and the front tyres' behaviour is not easily monitored through changes in the steering's resistance.

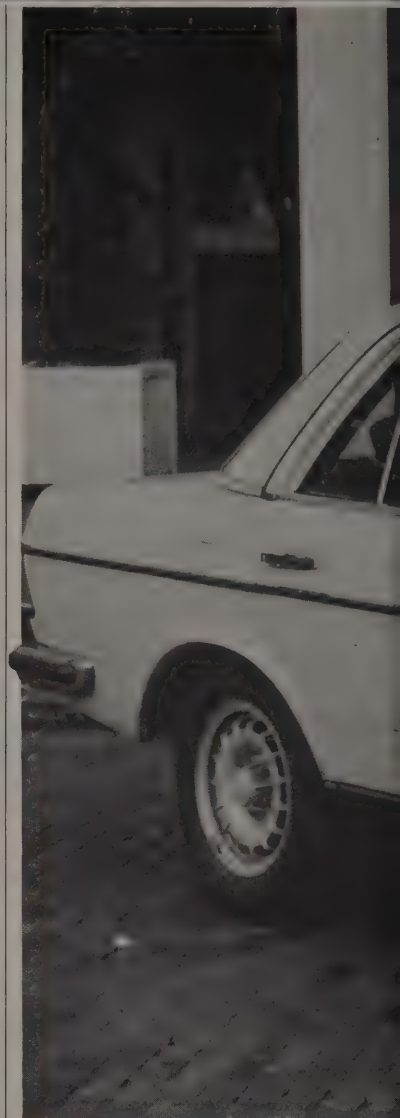
A neat, conservatively styled but meagre instrument display includes oil-pressure and coolant-temperature gauges, and a large clock sits where some testers would have preferred a tachometer. It's the speedometer's inaccuracy that infuriated most—no one will appreciate a dial that reads 35mph at a true 30mph and 77mph at 70mph. Telltale facia lamps are difficult to see in daylight, and the rheostat-controlled panel illumination will spend most of its time full-on. The handbrake's placing in the facia, to the right of the steering column, is less than ideal, but the single stalk for all wash/wipe and headlamp indicator functions is sensibly placed for righthand operation, leaving the left hand free for gear changes. (We believe that Mercedes, unlike most British and European manufacturers, are correct in this design detail.) A single rotary switch operates parking, side, main and integral front and rear foglamps with the minimum of fuss, and the familiar and inconspicuous way in which all these controls work is another subtle indication of the quality of Mercedes' engineering.

The central door-locking system controls all sill buttons with a facia switch and the driver's door key, and it also secures the fuel filler's flap and boot lid. Should the system fail, they continue to lock manually, and a second key is provided to open everything except the glovebox and boot.

How comfortable

You know you're riding in a Mercedes when you realise that it *never* rattles or jars over the pot-holes that play havoc with lesser cars. It's part of this *Luxusmodell's* aura of well-being and security that typifies the marque—though the 280E does let you know that its suspension is working hard by constant, cushioned movement and a surprising degree of audible thumping from the fat radials. On some undulating surfaces there's a hint of underdamping as the car shrugs and rocks a little in delayed reaction to a bump—movements made more disconcerting by the steering's vagueness. While there's never any big-car pitching and bouncing, we don't think the 280E's ride is as smooth or as unruffled as Peugeot's 604 and Jaguar's XJ.

When a tester's wife observed



MERCEDES-BENZ 280E

Front engine: 2746cc/6cyl, 2 OHC (chain); Bosch mech p/injection; 185bhp at 5800rpm
Rear drive: auto (4 ratios); 20.3mph/1000rpm
Suspension: front—ind wishbones, coil springs, anti-roll bar; rear—ind semi-trailing arms, coil springs, anti-roll bar
Steering: powered recirc ball, 3¼ turns/36ft circle; 6J wheels, 195/70HR 14 radials
Brakes: servoed discs all round
Parts/repairs (inc VAT)
exhaust £164.83 (2.4hr)
headlamp unit £67.67 (0.4hr)
front bumper (5 parts) £121.95 (2hr)
laminated windscreen £106.89 (3hr)
oil filter (no points) £2.69 (0.4hr)
major service 10,000 miles (4.25hr)

	per year	per mile
Running costs	£1002	8.35p
Loss of value	£360	3.0p
Total depreciation	£2680	22.33p
Insurance group	7/special terms	

THE RIVALS CLOCK IN

Rover 3500 (auto)
Audi 100 CD 5E (auto)
Peugeot 604 TI (man)
Ford Granada 2800 GL (auto)
Jaguar XJ6 3.4 (man)

HOW GOOD

At-a-glance

DRIVE's verdict on the Mercedes-Benz 280E, taking into consideration its rivals, its price and what kind of car it's *meant* to be

Out of five

PERFORMANCE

★★★★

FUEL ECONOMY

★★★

HANDLING/STEERING

★★★

COMFORT/REFINEMENT

★★

INTERIOR SPACE

★★★

PASSENGER AIDS

★★★

DRIVER AIDS

★★

ACCIDENT/INJURY SAFEGUARDS

★★★★

RUST RESISTANCE

★★★★

RUNNING RELIABILITY

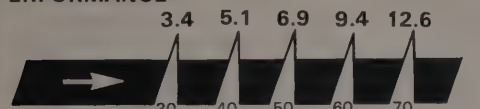
★★★★

Question Merc

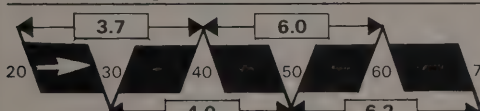


John Mason

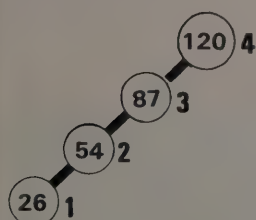
PERFORMANCE



Acceleration using manual override from rest (sec).



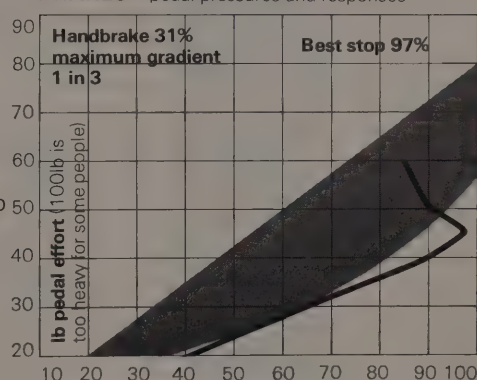
Speed range, using kickdown (sec)



Maximum speeds in gears

max engine speed used 6500rpm;
max in top 6250rpm;
standing $\frac{1}{4}$ mile 17.2sec

BRAKES—pedal pressures and responses



% efficiency (ideal car's braking performance falls within central zone—above, too heavy, below, too light)

Fade test pedal pressure needed for 75% stop (ideal car would show no variation)

35lb at start; 30lb in constant use; 38lb in severe use

Watersplash immediate recovery

FUEL 4/5-star/98 octane min
overall consumption 21mpg
effective tank range 300 miles/14 $\frac{1}{2}$ gal

Normal range of consumption

short journey, suburban	16 $\frac{3}{4}$ mpg
hard driving, heavy traffic	19mpg
mixed roads—brisk, 50mph cruising	21 $\frac{1}{2}$ mpg
motorway—70mph cruising	21 $\frac{3}{4}$ mpg
quiet rural—40mph cruising	24 $\frac{1}{4}$ mpg

Consumption at steady speeds

30mph	30 $\frac{3}{4}$ mpg
56mph	24 $\frac{1}{2}$ mpg
70mph	21 $\frac{3}{4}$ mpg
100mph	11 $\frac{1}{4}$ mpg

SAFETY CHECKS

steering: energy absorbing?	Yes	hazard warning: fitted?	Yes
front seats: secure mounts?	Yes	interior: well padded?	No
head restraint?	Yes	w/screen: laminated?	Yes
front belts: effective?	Yes	doors: crashproof?	Yes
convenient?	Yes	childproof?	Yes
rear belts: fitted?	No	petrol: spillproof?	Yes
		brakes: failsafe?	Yes
		load sensitive?	No

ON-ROAD PRICE (£)	CAPACITY (CC)	FUEL OVERALL (MPG)	MAXIMUM SPEED (MPH)	0-60MPH (SEC)	30-50MPH BEST (SEC)	BEST STOP (% g/lb)	OVERALL LENGTH (FT/IN)	MAXIMUM LEGROOM FRONT (IN)	TYPICAL LEGROOM REAR (IN)	STEERING TURNS/CIRCLE (FT)
8342	3528	22 $\frac{3}{4}$	117	9.2	4.5	100/70	15' 5"	41	40 $\frac{3}{4}$	2 $\frac{3}{4}$ /33 $\frac{3}{4}$
8700	2144	22 $\frac{3}{4}$	110	11.7	4.4	97/80	15' 4 $\frac{1}{4}$ "	42 $\frac{1}{2}$	42	3 $\frac{3}{4}$ /34 $\frac{3}{4}$
8490	2664	24 $\frac{1}{4}$	110	10.8	4.2	92/45	15' 5 $\frac{1}{2}$ "	39 $\frac{3}{4}$	41 $\frac{1}{2}$	3 $\frac{1}{2}$ /35
6994	2792	21	103	11.4	5.5	100/35	15' 7"	41	41	3 $\frac{1}{2}$ /35
11,863	3442	18 $\frac{1}{2}$	117	11.1	4.3	100/65	16' 2"	43	44 $\frac{1}{2}$	3 $\frac{1}{4}$ /39 $\frac{1}{4}$

that the monochrome upholstery reminded her of London Transport's seat trim, it was a somewhat backhanded compliment on the cloth's promising durability. The firm cushioning is typically Teutonic—as is the generous size of the driver's seat, which some testers criticised for lack of lumbar support and an over-prominent thigh cushion that tended to put right legs to sleep. There was nothing but praise, however, for the car's massive maximum 45in legroom and the range of adjustments for reach, rake and height.

Rear seat accommodation is as generous as you'd expect from a car of this size, though our rivals table proves that you don't have to pay this much to stretch out in comfort. There's an independent rear seat light—curiously operated from the front only—and oddments can be placed securely on the large, non-skid rear window shelf.

The heater's design is distinguished by a control panel that offers the front-seat passenger his own footwell temperature control—he'll need to consult the passenger behind, however, as the 280E also offers heating ducts to warm back-seaters' toes, too. Face-level fresh-air ventilation is independently controlled at the front only, and DRIVE's rear passengers complained of stuffiness until our car's optional electric sunroof glided open for ample, turbulence-free ventilation at the cost of some wind noise.

It's the luggage boot that disappoints: it's awkward to unload because of its high sill, and the massive spare wheel has to be manhandled from a well below the floor.

How strong

Mercedes has built an enviable reputation for constructional quality and reliability over the years, and the marque's aura of exclusivity in the UK tends to overshadow the comforting fact that Merces slog the world over as taxis and hire cars. And few other makes boast a 999,999-mile odometer.

The robust structure is protected

by impeccable priming and painting, but the final anti-rust coatings, while using the best wax spray treatment inside box sections that we have seen for a long time, are not as impressive on exterior surfaces as VW-Audi's efforts.

Mechanically, the 280E is a straightforward design, and the company's policy of evolving one model from another undoubtedly consolidates its reliability.

How safe

Strong beams in the doors, and thorough padding of the roof above the laminated windscreen and behind the sunvisors, led us to expect that Mercedes has left nothing to chance. But, after attending to safety details from a central-cage body structure down to a breakdown warning triangle stowed in the boot, how can M-B leave the backs of the front seats so hard and unpadded and not offer rear seatbelts—even as an option? The front Britax belts on our test car were extremely convenient, with the centre clasps mounted on the seats to ensure optimum location and tension; but they are an extra on the Merc's price-tag.

The brakes have that delicacy of response that the steering lacks. It's perfectly possible to get a maximum-efficiency stop without skidding, even though the pedal pressures are—in theory, at least—rather too light. Fade is virtually non-existent, and the all-disc system seems immune to floodwater, too.

How much

A list of 280E rivals quickly reveals that this Mercedes is expensive by any standard: BMW offers its 528i auto for £1600 less, and the Peugeot 604TI auto is currently £3000 cheaper. Fuel economy may be irrelevant in this league, but, even allowing for auto-transmission losses, the Peugeot and Rover's 3500 show a useful advantage, with the 280E excelling mainly on long, lawfully fast runs, where we found 22mpg perfectly feasible. It's traffic work that squanders the 4-star: the first half of our six-mile suburban

driving test produced 14mpg from a cold start, improving to an average 16½mpg over the complete test. By comparison, hard driving in heavy traffic over a long distance sees a gain of 3mpg.

While the fuel tank holds 17½gal it's very unlikely that you'll have the nerve to run it that low—or the patience to get the last couple of gallons in—hence our 14½gal tank-range shown in the table (the low-level telltale comes on when 2½gal remain). At around 2000 miles per pint, oil consumption is ideal, and the prominent dipstick tube is now also used for oil changes by Mercedes-Benz dealers. Fully electronic ignition, a diagnostic socket and no-maintenance front suspension components are M-B's latest, considered concessions to progress.

Some insurance companies demand special terms before accepting the 280E as even a Group 7 risk, and short-term depreciation is equally breath-taking at over 22p per mile. Over 2½ years/30,000 miles of average use, we reckon mini-Merc motoring would cost around £3700 per annum—£1000 more than the rival 3500 Rover, Ford Granada or Audi 100.

Verdict

Most quality products need time to be fully savoured, and we experienced three stages in our appreciation of this Mercedes.

In anticipation, there was a sense of reverence towards the respected badge—and the 280E's price-tag reinforces the myth of irreproachability. The euphoria then burst as we found its steering, ride and seating were not beyond criticism—and some potential buyers might consider its decor no justification for the size of cheque required.

But, after 1000 miles of use and abuse, we left the 280E with the smug satisfaction that we were right all along. The 280E is a fast car—particularly when you understand its autobox's ways, yet it can also be cheap to fuel by the standards of its class and, most satisfying of all, it is built to last.

Like buying a pair of handmade *veldtschoen*, the only bit that really hurts is signing the cheque.



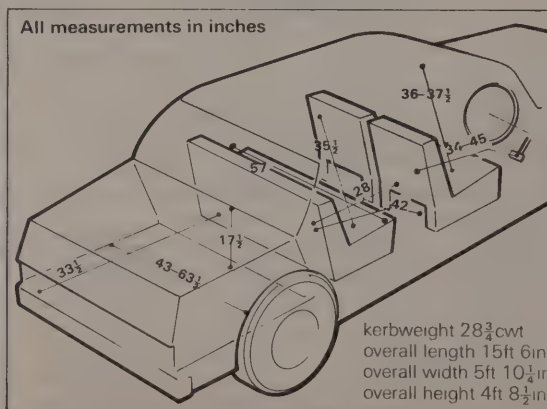
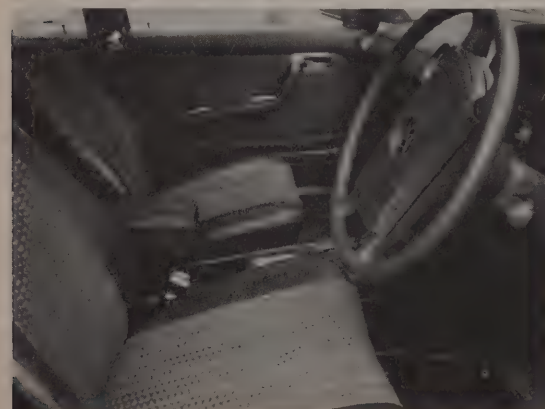
The mini-Merc started its Everyman test day with the handicaps of a larger-than-life image and price-tag. Two amateur drivers concluded that neither was justified...

'It was like a big, wobbly Volkswagen Beetle,' said Andrew Perry. 'It may have lots of sporty bits that are nice, but it behaves like a very big saloon—a peculiar blend. Yes, the gearbox and the steering were good, and the brakes were as fantastic as I expected. I liked the electric windows and sunshine roof, and the thorough safety precautions—the warning triangle in the boot and medical kit on the back shelf were nice touches. It's just that wherever I sat in the car—even behind the wheel—I felt road-sick. I certainly wouldn't buy this Mercedes. For the same money I'd buy a saloon and a sports car.'

For Fred Pocock, it was love at first sight: 'It's terrific,' he insisted. 'Maybe I'm biased by the fact that I've driven one before, but this model was every bit as good as I expected it to be. The front seats are exceptionally comfortable—apart from the head restraints. They obscured vision when reversing and I think they're dangerous. I did like the electric windows but my worry is that, if I had an accident, I might not be able to get out through them; they should have winding handles as well. The automatic gearbox was beyond criticism, and the power was terrific; in S it's beautiful.'

Claire Parker agreed with Andrew. 'I had preconceived ideas about a super-duper Mercedes, but the 280E was nowhere near as luxurious as I thought it would be. Very German and solid, but not the sort of car I'd want. I felt I had to drive it sedately, so I was really surprised to find out that it could go like a bomb—perhaps I was to blame for not being familiar with automatics. I liked the enormous boot, and there certainly was loads of room inside the car. I know it's big, but the size didn't bother me on the road.'

Professional car tester Peter Denayer replies: 'It's intriguing that Granada-driving Fred loved what Peugeot-owning Andrew disliked. And Claire's slim frame and wallet are not what Mercedes had in mind.'





INDEX

Double trouble

IT HAD TO happen—with the DRIVE Index of Motoring Costs at the 200 mark for the first time ever, the price of car-ownership is now double what it was in October 1973.

The good news, however, especially for Britain, is that the Vauxhall Chevette can stand up and take a bow: a new entry in our revised list, the Luton penny-pincher is the most economical car in the Index at 4.84p per mile.

Hot on the Chevette's economy trail are the Fiat 128/124 at 5.17p, Austin Allegro at 5.24p, Datsun Sunny at 5.25p, Vauxhall Cavalier at 5.28p and the Volkswagen Golf/Polo at 5.33p.

Despite some good individual performances, British cars as a whole fall somewhere in the middle of our value-for-money league—costlier per mile than the W German, Italians and Japanese, cheaper than the French. This is mainly a result of high fuel consumption: UK-car owners spend 3.19p per mile on petrol as against the 2.99p for foreigners.

The reason for the rising index number is more spending on accessories (up 81p to £9.23 per year), insurance (up £1.10 to £53.61) and 'other costs'—parking and so on—(up £2.47 to £94.19). And it would seem that, to finance this, motorists are spending slightly less on servicing, repairs and oil. Petrol costs have remained static, despite price rises, with drivers covering less miles in January and February than in the preceding two months—the combined effects of bad weather and fuel shortages. Nevertheless, they did manage to average the same mileage as they did in the same period last year. They just paid more to do it!

COST OF MOTORING: March 1978–February 1979

INDEX Oct 1973 = 100	102	196	203	99	218	110	179	208	200
MONTH-BY-MONTH ANALYSES (all cars) AND ENGINE RATING ANALYSES (post-1969 cars)	Average monthly mileage	Cost per mile (pence)	Petrol	Oil	Servicing repairs	Accessories	Insurance	Other costs	TOTAL
March 1978	674	6.69	21.47	0.70	11.33	0.76	4.22	6.59	45.08
April 1978	757	6.47	23.85	0.93	10.86	0.40	4.17	8.78	48.99
May 1978	762	7.82	24.86	0.63	21.56	1.18	4.33	7.05	59.62
June 1978	852	5.84	24.38	0.81	11.88	1.01	4.41	7.28	49.77
July 1978	813	6.55	24.92	0.89	14.19	0.31	4.41	8.50	53.22
August 1978	872	5.91	25.64	0.78	10.42	1.03	4.51	9.13	51.52
September 1978	798	6.56	23.27	0.84	15.08	0.65	4.45	8.02	52.31
October 1978	807	6.20	24.49	0.64	12.77	0.70	4.58	6.88	50.05
November 1978	784	6.88	24.72	0.54	15.01	0.38	4.60	8.68	53.94
December 1978	649	7.97	23.12	1.70	14.14	0.58	4.60	7.59	51.73
January 1979	579	7.98	19.54	0.40	12.49	2.00	4.61	7.15	46.18
February 1979	644	7.33	22.85	0.71	10.12	0.23	4.72	8.54	47.17
TOTAL (for year)	749	6.78	283.11	9.57	159.85	9.23	53.61	94.19	609.57
—900cc	562	6.34	14.08	0.60	10.35	0.22	4.09	6.28	35.61
901–1100cc	622	6.51	17.98	0.54	9.67	0.75	4.24	7.29	40.48
1101–1300cc	740	6.40	21.62	0.68	12.22	0.82	4.39	7.62	47.35
1301–1500cc	740	6.60	22.00	0.62	13.05	1.49	4.50	7.17	48.82
1501–1700cc	930	6.64	30.45	0.60	17.37	0.75	4.89	7.64	61.70
1701cc +	946	6.88	32.84	1.12	16.68	0.81	5.65	7.98	65.10
MODEL-BY-MODEL ANALYSES (post-1969 cars)									
Austin Morris Mini 850	602	5.93	15.19	0.40	9.74	0.34	4.15	5.87	35.70
Mini 1000	554	6.67	14.37	0.42	10.71	0.55	4.01	6.91	36.96
1100/1300	548	7.68	17.00	0.86	11.39	2.01	3.92	6.90	42.08
Allegro	731	5.24	20.79	0.95	4.34	0.71	4.33	7.17	38.29
Maxi 1500/1750	762	6.57	24.10	0.82	13.45	0.00	4.47	7.23	50.08
Marina 1300	909	6.07	24.53	0.58	17.38	0.74	4.25	7.69	55.17
Marina 1800	923	6.65	28.97	0.43	19.49	0.23	4.85	7.40	61.38
1800/2200	690	9.01	21.61	1.66	25.75	2.82	4.10	6.20	62.14
Princess	825	6.37	29.23	0.07	10.01	0.00	4.59	8.68	52.59
Chrysler Imp	368	7.85	13.86	1.10	4.69	0.00	3.50	5.70	28.86
Avenger	708	7.67	23.20	0.67	19.12	0.72	4.16	6.47	54.33
Hunter 1500/1750	840	6.57	25.87	0.74	13.80	1.90	4.16	8.69	55.16
Datsun Cherry	697	5.69	19.80	0.67	7.78	0.00	4.92	6.47	39.65
Sunny	842	5.25	22.32	0.90	9.51	0.00	5.25	6.23	44.21
Fiat 128/124	840	5.17	19.25	0.43	12.13	0.00	4.63	6.94	43.38
Fiat 500/127	457	8.58	11.28	0.25	17.12	0.00	4.43	6.08	39.17
Ford Escort 1100/Popular	664	6.37	21.88	0.50	7.85	0.60	4.22	7.25	42.31
Escort 1300	837	6.18	24.72	0.51	11.56	2.90	4.45	7.58	51.71
Cortina 1300	758	5.69	23.52	0.27	7.71	0.49	4.12	7.04	43.14
Cortina 1600	1015	6.34	32.50	0.53	17.94	0.87	4.58	7.94	64.35
Cortina 2000	1025	6.35	33.88	0.53	15.66	1.01	5.58	8.47	65.11
Capri 1600	805	6.63	28.68	0.49	9.81	0.81	5.33	8.28	53.40
Granada/Consul	1152	6.66	44.73	1.35	17.22	0.00	5.83	7.62	76.75
Rover 2000/3500	841	7.67	31.20	0.42	19.52	0.39	5.76	7.20	64.50
Triumph Toledo/Dolomite	663	7.33	21.59	0.73	10.85	3.59	4.75	7.06	48.57
Triumph 2000/PI	908	7.20	37.57	0.68	13.49	1.31	5.86	6.50	65.42
Simca 1000/1100	617	7.83	19.34	0.36	16.87	1.46	4.40	5.87	48.30
Vauxhall Viva	714	6.44	20.06	0.87	12.74	0.14	3.96	8.17	45.94
Chevette	819	4.84	21.07	0.79	4.90	0.24	4.46	8.15	39.61
Cavalier	1132	5.28	35.90	0.26	8.45	0.00	5.74	9.44	59.79
VW Beetle	572	6.89	18.18	0.70	8.30	0.00	4.10	8.16	39.44
Golf/Polo	857	5.33	25.16	0.09	8.50	0.25	5.05	6.64	45.69
All Chrysler UK	749	6.87	23.76	0.79	13.97	1.27	4.18	7.48	51.45
Ford	883	6.30	28.94	0.56	12.55	1.11	4.74	7.76	55.66
Leyland	710	7.07	22.66	0.95	13.92	0.95	4.57	7.21	50.26
Vauxhall	795	6.49	23.74	0.90	14.49	0.21	4.31	7.96	51.62
All British	781	6.68	24.90	0.79	13.49	0.93	4.55	7.57	52.23
All Fiat	708	6.05	17.77	0.51	12.40	0.00	4.86	7.32	42.85
Renault	792	6.71	21.93	0.40	18.06	0.52	4.75	7.52	53.18
Simca	605	8.72	19.33	0.27	21.51	1.12	4.66	5.87	52.77
Volvo	825	6.88	31.85	0.70	9.43	0.76	6.72	7.22	56.69
All French	793	6.72	22.65	0.42	16.64	0.64	4.90	7.99	53.24
Italian	703	6.14	19.36	0.47	10.64	0.00	5.24	7.45	43.16
Japanese	830	6.41	24.24	0.93	15.18	0.00	5.58	7.26	53.20
W German	893	6.14	27.45	0.51	12.73	1.23	5.42	7.45	54.80
All Foreign	900	6.44	23.89	0.60	13.81	0.51	5.30	7.45	51.56
Average monthly costs (£) excluding depreciation									



CAR TESTS

When the power and the glory of saloon car racing is BMW's image, then even its smallest coupé must fly . . .

BMW 323i

Price £6949 On the road £7099

Oompah bands, beer festivals and winter sports are the best-known spices of Bavarian life, and their motorizing's pursued with gusto, too. In the heart of the capital, Munich, one *platz* is allegedly the scene of frequent, unofficial attempts on the German land speed record . . . So it's almost inevitable that Munich should house the Bayerische Motoren Werke—a firm that injects stolid German auto engineering with Bavarian bravado to create the BMW range of sporting saloons.

In the sixties, BMW made its marque with the 2002, a quality, lightweight coupé body propelled by a powerful saloon-sized engine. Car testers and well-heeled boy-racers alike bemoaned its eventual replacement with the heavier (if safer) 3-Series body—until the four overworked cylinders were replaced by six and, more recently, a bigger-bored unit with fuel injection. The result was the 323i, heir-apparent to the legendary 2002tii's crown.

DRIVE decided to test its pretensions, took delivery, and forced the test team back into an orderly queue . . .

How it goes

Proud 323i owners could have trouble convincing their spouses that it's a placid family hack, for our car took 10–15sec to crank into life when cold, and its tick-over remained erratic even after the complex injection settings were adjusted. Though it is capable of ambling smoothly to the *kindergarten* in top gear, this car merely tolerates such gentle treatment.

Rev up to 4000rpm, drop the clutch abruptly, and it's a far happier beast. The test car screamed down the test track's straights with neck-jerking acceleration that made the most blasé of testers wince with delight.

The 2.3litre engine is one of the new generation of six-cylinder designs that actually prefers to work hard for its living—eager to rev to its 6400rpm limit with the metallic crackling of an Italian exotica. It's a sound that might deter the faint-hearted, but our performance table opposite shows that the 323i enjoys a good gallop, for a 50–70mph overtaking spurt takes no longer than from 30–50 mph, and it will pound on in the same gear to 120mph. This impressive maximum speed is, however, achieved beyond the engine's peak power and close to the tachometer's red line.

The margin by which the BMW beats its rivals in our table also

reflects the gear shift's clean action and the clutch's delightful smoothness—though *down*-changes into the two lower ratios at higher speeds can cause the synchromesh to balk and call for rapid heel-and-toeing.

While anyone with £7000 to spend can enjoy the 323i's straight-line performance, only those with skill and nerve will fully exploit its cornering power. It is possible to weave the BMW through bends with the poise and speed of a Bavarian slalom champ—but only by preserving its balance with steady throttle pressure. Apply or remove the power too clumsily, and a sure and steady tail slide ensues. To the motorist whose cornering 'skills' were acquired on unflappable front-wheel-drive cars, this sounds like a frightening rear-wheel-drive fault. To the enthusiast weaned on traditional sports car handling, it's a design that gives control over all four wheels (the front by steering, the back by throttle variation) for optimum cornering power.

Whether you find the 323i's tail-wagging a virtue or a vice, its sensitive steering does have a marvellous ability to report the degree of road grip. This helps a keen driver to work with the car, but to hustle a 323i safely on public roads, enthusiasm needs

HOW GOOD

At-a-glance

DRIVE's verdict on the BMW 323i, taking into consideration its rivals, its price and what kind of car it's *meant* to be

Out of five

PERFORMANCE

●●●●

FUEL ECONOMY

●●●●●

HANDLING/STEERING

●●●

COMFORT/REFINEMENT

●●●●

INTERIOR SPACE

●●●●

PASSENGER AIDS

●●

DRIVER AIDS

●●●

ACCIDENT/INJURY SAFEGUARDS

●●●

RUST RESISTANCE

●●●

RUNNING RELIABILITY

●●●●

tempering with mature judgement.

One reminder of BMW's aircraft-building days is the 323i's fascia, where all instruments are grouped in a single cowl behind non-reflecting glass—a once-novel idea that's now the norm, but BMW still impresses. As befits a fast car, the speedometer and tachometer are centrally placed, with minor fuel and temperature gauges flanking and a group of three warning lamps above each. Everything is crisply labelled in white lettering that's softly backlit at night, and the instruments are lit in red—a Teutonically efficient detail based on the knowledge that eyes function best at night in red light. Even the heating, ventilation and radio controls are grouped on a central console that's thoughtfully angled back towards the driver's field of vision for easy-on-the-road operation. The two stalks, for wash-wipe and indicator/dip, work smoothly—and the spoke-mounted horn buttons rather too much so.

How comfortable

The appeal of the old BMW 2002 was its versatility—a pleasing machine whatever its driver's mood—and this quality has at last been recaptured in the 323i. This *donner und blitzen* projectile can also glide gently, taking the angst out of motoring with the stable, unruffled ride of an 'executive' saloon. Early 3-Series cars tended to heave up and down histrionically, but the current suspension settings have both cured the ride and enhanced the cornering.

If DRIVE had owned the test car, the final drive's whine would have worried us—a noise we've noticed on previous BMWs. The engine never gives the remote hum that some expect of a quality straight-six, and a fair amount of mechanical activity feeds into the passenger compartment via the brake's servo rod; but it's all less offensive than the resonant booms that are the bane of many a four-cylinder motor.

Bavarian beer consumption averages more than 46gal per person per year—so it's no surprise that the BMW's seats are generously large, front and back. The driver's seems hard at first, but supports well on long runs, and only those over 6ft tall complained about legroom, when the level pedal heights caused accelerator-leg fatigue. While no wheel or seat-height adjustment is offered, the seat reach and rake settings can be adjusted minutely.

We didn't expect saloon-car accommodation of this sporting, two-door coupé, yet the effort of easing between door pillar and tilted seat is rewarded with a surprisingly comfortable rear seat, adequate legroom, and contouring superior to that in the BMW

BMW 323i

Front engine: 2315cc/6cyl, OHC (belt); Bosch mech p/injection, 143bhp at 6000rpm
Rear drive: 4 gears, 19.2mph/1000rpm
Suspension: front—ind MacPherson struts, coil springs, anti-roll bar; rear—ind semi-trailing arms, coil springs, anti-roll bar
Steering: rack and pinion, 4 turns/31½ft circle; 5½J wheels, 185/70HR 13 radials
Brakes: servoed discs all round

Parts/repairs (inc VAT)
clutch £93.87 (fitting 2.75hr)
exhaust £141.81 (1.5hr)
headlamp unit (no bulb) £16.36 (0.5hr)
front bumper (4 parts) £95.48 (1hr)
laminated windscreen £63.50 (2hr)
oil filter (no points) £3.66 (0.5hr)
major service 10,000 miles (4hr)

	per year	per mile
Running costs	£1008	8.4p
Loss of value	£287	2.39p
Total depreciation	£1410	11.76p
Insurance group	8/special terms	

THE RIVALS CLOCK IN

Audi Avant GL 5S

Triumph Dolomite Sprint

Porsche 924

Ford Capri 3000 Ghia

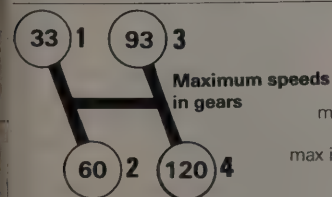
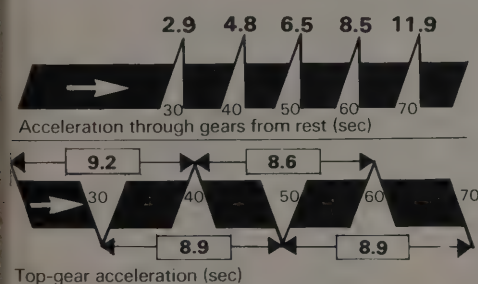
Reliant Scimitar GTE

BMW Wunderbar



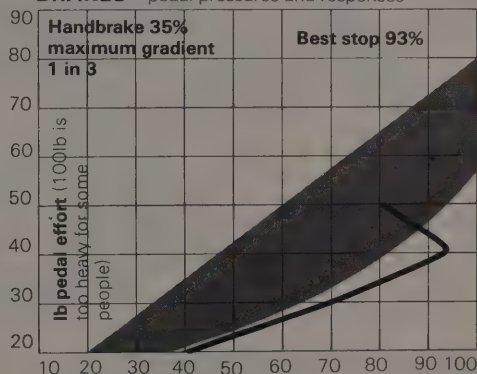
John Mason

PERFORMANCE



max engine speed used 6400rpm;
max in top 6250rpm;
standing $\frac{1}{4}$ mile
17sec

BRAKES—pedal pressures and responses



% efficiency (ideal car's braking performance falls within central zone—above, too heavy, below, too light)

Fade test pedal pressure needed for 75% stop (ideal car would show no variation)
33lb at start; **27lb** in constant use; **47lb** in severe use
Watersplash 36lb at first, 2 stops to recover

FUEL 4-star/98 octane min overall consumption 26 $\frac{1}{2}$ mpg effective tank range 320 miles/12gal

Normal range of consumption

short journey, suburban	22mpg
hard driving, heavy traffic	22 $\frac{1}{2}$ mpg
motorway—70mph cruising	26 $\frac{1}{2}$ mpg
mixed roads—brisk, 50mph cruising	28 $\frac{1}{2}$ mpg
quiet rural—40mph cruising	31 $\frac{1}{2}$ mpg

Consumption at steady speeds

30mph	40mpg
56mph	32mpg
70mph	26 $\frac{1}{2}$ mpg
100mph	17 $\frac{1}{2}$ mpg

SAFETY CHECKS

steering: energy absorbing?	Yes	hazard warning: fitted?	Yes
front seats: secure mounts?	Yes	interior: well padded?	Yes
head restraint?	Yes	w/screen: laminated?	Yes
front belts: effective?	Yes	doors: crashproof?	Yes
convenient?	Yes	childproof?	Yes
rear belts: fitted?	Yes	petrol: spillproof?	Yes
		brakes: failsafe?	Yes
		load sensitive?	No

ON-ROAD PRICE (£)	CAPACITY (CC)	FUEL OVERALL (MPG)	MAXIMUM SPEED (MPH)	0-60MPH (SEC)	30-50MPH IN TOP (SEC)	BEST STOP (% g/lb)	OVERALL LENGTH (FT/IN)	MAXIMUM LEGROOM FRONT (IN)	TYPICAL LEGROOM REAR (IN)	STEERING TURNS/CIRCLE (FT)
6660	2144	26 $\frac{1}{2}$	108	11.3	10.7	97/80	15' 0 $\frac{1}{2}$ "	42 $\frac{1}{2}$	39 $\frac{1}{2}$	4 $\frac{1}{2}$ /35 $\frac{1}{2}$
5793	1998	30	112	9.3	8.2 (4th)	95/60	13' 6"	40	37	3 $\frac{1}{2}$ /30 $\frac{1}{2}$
8679	1984	30 $\frac{1}{2}$	125	8.9	9.9	95/50	13' 8 $\frac{1}{2}$ "	46	24 $\frac{1}{2}$	4/31
6340	2994	22	113	9.9	3.3 (k/d)	94/55	14' 3"	41	36	3 $\frac{1}{2}$ /34 $\frac{1}{2}$
7814	2994	21 $\frac{1}{2}$	118	9.1	8.1 (4th)	100/100	14' 6 $\frac{1}{2}$ "	40 $\frac{1}{2}$	—	3 $\frac{1}{2}$ /38

4th—4th gear

k/d—kickdown

520 saloon. Headroom may be skimpy, but the seat cushion's wide enough for three Britons—if one doesn't mind being given the hump.

Good demisting and ventilation systems guarantee a clear view in the most difficult weather. Separately controlled fascia vents provide fresh air on either side, and a powerful three-speed fan boosts cooling and heating. The theoretically inferior water-valve temperature control responded well to adjustments in practice, yet the expensive optional sunroof fitted to our test car proved noisy at even low touring speeds.

Door-locking sill buttons pop up automatically in response to the unlocking triggers lurking below the door armrests—a system that keeps back-seat children safely away from mischief—and a second 'doorman' key is provided that does not give access to the boot or fascia box. Luxury options such as central door locking and electric window lifts are extremely expensive, and one wonders about BMW's pricing policy when it emerges that the test car's fitted radio-cassette player could have been added after delivery for less than half the price BMW asks...

How strong

What £7000 doesn't buy in trimmings, BMW makes up for in sheer quality of body construction—but the improved rust protection of recent years took a backward step on our test car. We were disappointed by scanty pvc underbody protection, and the minimal effort made to get thorough wax-spray penetration into important box sections; the less-vital insides of doors got a conscientious coating. Paint, fortunately, gets everywhere it should, there are no serious mud-traps under the wheelarches, and sills are well protected.

Underbonnet, the 323i pays the price of its extra power in inferior accessibility for DIY mechanics. The long block obliges the electric cooling fan to sit in front of the radiator and blow instead of suck—which it does well—and fuel injection equipment fills what space is left in the crowded

engine-room, so it's fortunate that there are no contact-breaker points to grope for. Despite the informative handbook and impressive tray of tools neatly recessed in the boot lid, most owners will feel encouraged to leave maintenance to the experts. And there are substantial towing eyes, front and back, should the experts fail.

Cleaning the 323i has its problems, too: awkward recesses round the front grille; thick, water-harboring rubbing strips and brightwork; carpets that can't be removed easily; and pale upholstery on the test car that showed the dirt too readily—though it shrugged it off well.

How safe

While enjoying immensely the 323i's lively handling, we admit that it makes more demands of the driver than most modern cars—including sporting ones—and the foolhardy could easily lose control when faced with the unexpected while cornering fast. The brakes also take some getting to know. They feel over-servoed in 30mph stops, but their speed sensitivity means that pedal pressures increase to the ideal when arresting the car at high speed. Even so, the front discs will lock the wheels if too much effort is used. Fade is no real problem, watersplash recovery is impressive, and 1-in-3 hills are no obstacle—handbrake, door stays and tickover all working normally.

Some may regard this car's sheer driveability as the first line of accident defence. If the worst does happen, this sporting coupé carries an impressive list of injury-prevention features. Though BMW is not as strident as some makers in its safety claims, our checklist shows that it protects its drivers thoroughly—even better than does Daimler-Benz in the Mercedes 280E. Front seatbelt anchorages are on the seats to ensure maximum comfort and security, and the rear pair's convenience ensures that they will be used, too. Padding on the backs of the front seats and in the roof is impressive, and the strength of the central passenger cell was

the starting point for the design of the 3-Series range of models.

How much

At £7099 the 323i costs substantially more than the rival Triumph Sprint or Ford Capri 3000, and is £2250 pricier than the puniest of the 3-Series range, the 1600cc 316. It hasn't been around long enough for its depreciation to be assessed, but the humbler 320 does reasonably well (see table) and we can see its reputation being enhanced by this fuel-injected version.

The trade-off between performance and fuel thirst is easier to measure. Our test BMW 320 (2000cc shared over four cylinders) recorded 26½mpg overall, itself only 1mpg thirstier than the base-model 316, so our consumption table shows that a 323i buyer gets all the excitement for no extra petrol penalty save the cost of 4-star instead of 2.

Routine maintenance falls every 10,000 miles, with engine-oil and filter renewal at the halfway stage. Servicing costs, inflated less by labour than by the high cost of spares, could add up to more than £70 for air, oil and fuel filters alone at the 30,000-mile mark. Buyers hoping for long-term use should read the BMW six-year anti-rust warranty carefully, as it requires additional expenditure.

Verdict

The vivacious 323i has managed to dim our fond memories of the pensioned-off BMW 2002tii. Of course, car testers can afford to be more fickle than car buyers, but yesterday's model just could not live with its successor's good looks and winning ways.

Yes, this *fraulein's* expensive—to buy, insure and repair—but think of the consolations. You can introduce her with confidence to mater, pater and auntie as an oh-so-civilised creature of smooth deportment and parsimonious tastes. Pater, with luck, might even foot the dealer's bill. And, when you've dropped them all at the station, there's a chance to enjoy the animal howl of the motor as it kicks you into another power-slide...

No, mater wouldn't like that.



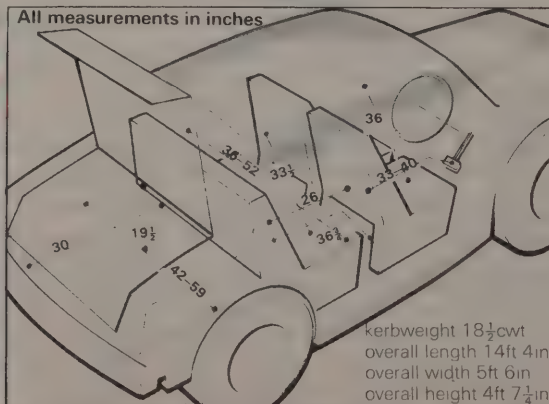
The BMW was the least expensive of the dynamic German duo that our amateur drivers tested—but they all preferred it to the Mercedes.

'It's so positive and nippy,' said 34-year-old antiques dealer Andrew Perry. 'I begged to be driven, the acceleration was superb and, being so small, it seemed even faster than it was. Thankfully the brakes were very positive—I was with Fred when he tried an emergency stop—and the gearbox was great; you really could select the right gear instead of slamming the lever around. Steering was positive and light, too, so much so that at first I thought it was power-assisted. Inside, I liked the curved fascia, but I felt that the control labels all demanded to be read before you drove off. The 323i is a super performer—on the motorway or in town. I was impressed.'

'Andy's said it all,' added Fred Pocock, a 50-year-old building consultant. 'I found the seating comfortable and the driving position very, very good. I had only one little problem, which must be my fault, for I had to rest my left foot underneath the clutch, and every time I moved it I hit my knee on the steering wheel. The engine was noisy, though you can enjoy listening to it. I liked the curve of the fascia, too, but I didn't like the main lighting switch: it ought to be pull for sidelights and *turn* for headlamps—not pull for both. As for performance and handling, what can I say but... beautiful.'

'I loved the car,' said Claire Parker, a 25-year-old housewife and advanced motorist. 'I felt comfortable instantly; the steering wasn't too heavy, and the pedals were just right for me. The acceleration was fabulous, and I felt its roadholding was secure, so I really enjoyed bounding along. It's a versatile car, and I'd buy it regardless of whether it was value for money.'

AA road-tester Peter Denayer carried out the official test of the BMW, and his comments on the amateurs' findings are approving: 'They obviously warmed to this car as much as I did, though some owners, it seems, appreciate the engine's noise rather less than did Fred. It's a problem on righthand drive models as the brake servo rod channels engine noise inside.'



A smashing reason for buying cheap foreign pads.

These days you have a choice when you buy a new set of disc pads. You can either pick a British make like Top Dog and be sure of consistent quality and performance.

Or you can save a few bob and go for unbranded foreign pads that don't carry a sign of quality.

A few bob off the purchase price is the only saving you will make. Because dynamometer tests show that many imported pads wear out up to four times faster than reputable quality stamped British makes, they can be unstable under high speed braking conditions; and they can have very poor fade resistance.



All of which means they're a very poor bargain in the long run.

Assuming they give you a long run of course.

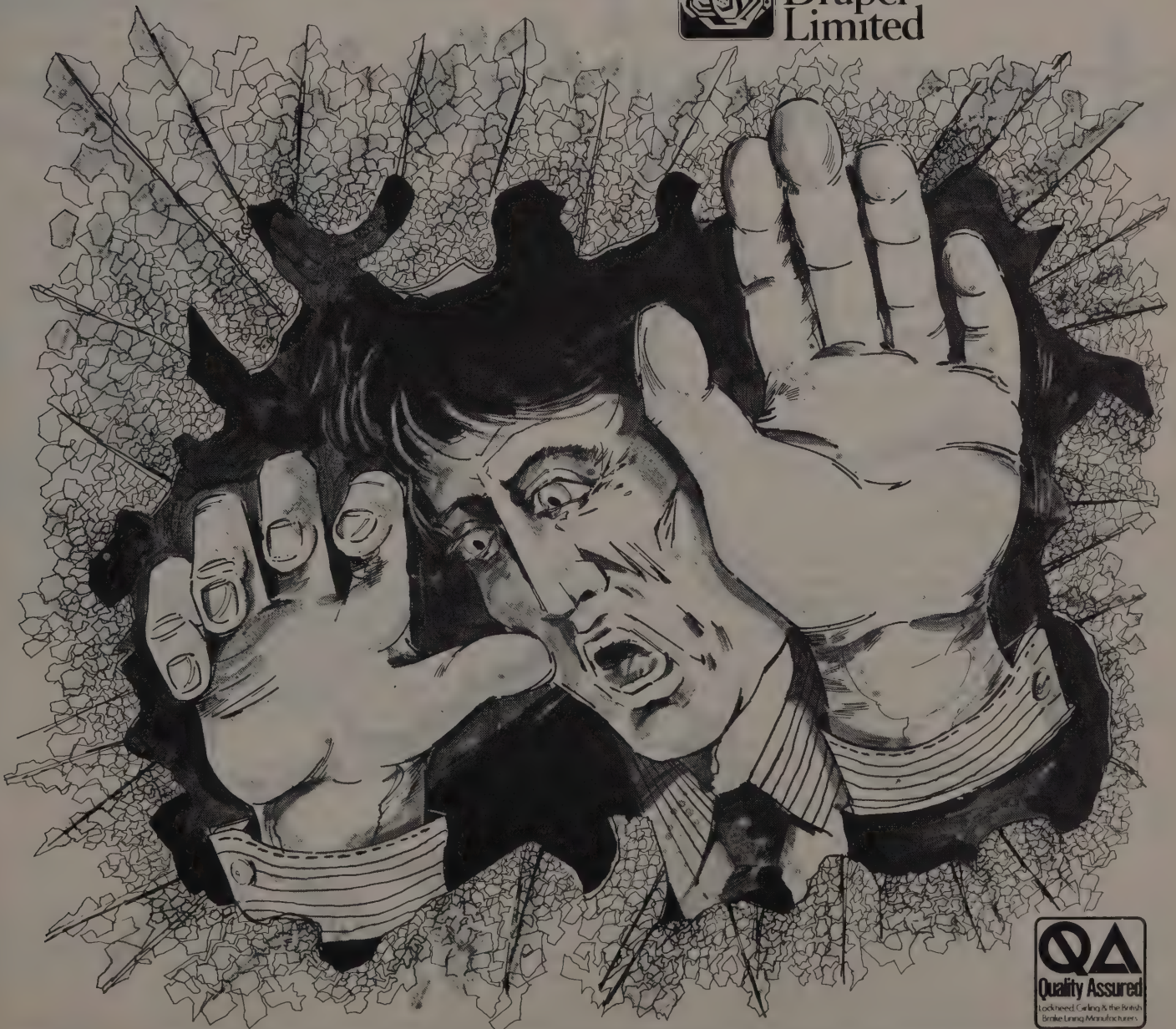
Many foreign pads are so ineffective even when new, that after prolonged heavy use you could find yourself making an emergency stop with nothing under your right foot.

So make sure you fit only British made Top Dog pads and shoes to your car.

They won't save you any money; but they could save you an extremely painful trip through your windscreen.



**Trist
Draper
Limited**



Put an **AA** Members Loan at the top of your shopping list

Whatever you're thinking of buying that's going to cost you £200 or more, you'll find you're better off buying it with the help of an AA Members Loan.

- * You can shop around with all the edge of paying cash.
- * You buy now, at today's prices.
- * You spread the cost over monthly instalments.
- * Your instalments are lower than most other finance plans

because you enjoy a special reduced rate of interest exclusively arranged for AA Members.

Save time by using the form opposite to apply for your loan now. We promise you a speedy answer.

How much? How long? The minimum initial loan is £200 and normally repayment can be spread over periods up to five years and even longer for more costly home improvements.

All loans are subject to compliance with government controls, for example the maximum loan on a motor car is two thirds of the cost and the longest payment period is 24 months.

Apply now Below are tables at the current rate of interest which will help you decide on the loan which suits you best. Complete the application form opposite and post it to Mercantile Credit, FREEPOST, PO Box 75, London WC2B 5XA... no stamp is needed. As soon as your loan is approved you will receive a personal cheque in a few days.

AA MEMBERS' LOAN MONTHLY REPAYMENT TABLES

Interest on amount of loan: 1-2 years - 11.5% flat for each 12 months 3-5 years - 12% flat for each 12 months.

Amount of loan	12 Months True interest 22.5% p.a.			24 Months True interest 22.5% p.a.			36 Months True interest 23% p.a.			48 Months True interest 22% p.a.			60 Months True interest 21.5% p.a.		
	Total Repayable	Interest	Mthly. Pay.	Total Repayable	Interest	Mthly. Pay.	Total Repayable	Interest	Mthly. Pay.	Total Repayable	Interest	Mthly. Pay.	Total Repayable	Interest	Mthly. Pay.
	a	b	c	a	b	c	a	b	c	a	b	c	a	b	c
£	£ p	£ p	£ p	£ p	£ p	£ p	£ p	£ p	£ p	£ p	£ p	£ p	£ p	£ p	£ p
200	222.96	22.96	18.58	246.00	46.00	10.25	272.16	72.16	7.56	296.16	96.16	6.17	319.80	119.80	5.33
300	334.56	34.56	27.88	369.12	69.12	15.38	407.88	107.88	11.33	444.00	144.00	9.25	480.00	180.00	8.00
400	446.04	46.04	37.17	492.00	92.00	20.50	543.96	143.96	15.11	591.84	191.84	12.33	640.20	240.20	10.67
500	557.52	57.52	46.46	615.12	115.12	25.63	680.04	180.04	18.89	740.16	240.16	15.42	799.80	299.80	13.33
600	669.00	69.00	55.75	738.00	138.00	30.75	816.12	216.12	22.67	888.00	288.00	18.50	960.00	360.00	16.00
700	780.48	80.48	65.04	861.12	161.12	35.88	951.84	251.84	26.44	1,035.84	335.84	21.58	1,120.20	420.20	18.67
800	891.96	91.96	74.33	984.00	184.00	41.00	1,087.92	287.92	30.22	1,184.16	384.16	24.67	1,279.80	479.80	21.33
900	1,003.56	103.56	83.63	1,107.12	207.12	46.13	1,224.00	324.00	34.00	1,332.00	432.00	27.75	1,440.00	540.00	24.00
1,000	1,115.04	115.04	92.92	1,230.00	230.00	51.25	1,360.08	360.08	37.78	1,479.84	479.84	30.83	1,600.20	600.20	26.67

For loans in excess of £1,000, total repayable, interest and monthly payment are pro rata. Rates at 1st May 1979.



Use this form to get your cheque quicker

To apply for your AA Members Loan complete this form and post to
Mercantile Credit, FREEPOST PO Box 75, London WC2B 5XA.

Surname _____

First Names _____

Married/Single _____ (Tick as applicable)

Country of Birth _____

Date of Birth _____

Are you in good health? YES/NO _____ No. of dependent children _____

Full postal address _____

Postal Code _____

How long at address? _____

Tel. No. _____

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DEPT.

SERIAL NO.

CHECK DIGIT

Occ. Code

Owner/Tenant House/Flat/Rooms/
Living with parents _____ (Tick as applicable)

Profession or trade _____

Name of employer _____

Business Address _____

How long in their employ? _____

Bankers _____

Bankers address (in full) _____

Do you hold a Barclaycard? YES/NO _____

AA Membership No. _____

Purpose of loan (give details) _____

Total cost of goods or service £ _____

Amount of cash required £ _____

Repayment period required _____ months

Average net monthly take-home pay (i.e. after
deduction of Income Tax, N.H.I. Contributions, etc.)
£ _____ monthly

Any other income £ _____ monthly

Please submit your latest P.60 or other annual
advice or at least two monthly/weekly pay slips

Mortgage payments/Rent £ _____ monthly

Total of current hire purchase and credit payments
£ _____ monthly

Any other regular payments £ _____ monthly
(Give details)



I/We submit this proposal to you for a loan of £ _____ and I/we warrant the accuracy of the replies. You may make all enquiries necessary to enable you to consider this application and from time to time disclose to the National Credit Register details in respect of this transaction excluding any information relating to income. If you need to clarify any information, in the application form, or obtain my agreement to the amendment of any documents, please regard this as a formal request to visit me at my home. It is understood that you reserve the right to decline this application without stating a reason. Membership of the Automobile Association or a previous or current account with Mercantile Credit do not of themselves ensure acceptance.

SIGNATURE _____

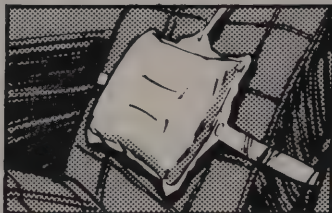
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This is a quality product, developed specifically for vehicle drivers, office workers and people who sit for long periods. Will bring comfort to many. Why suffer unnecessarily on long journeys?

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MONEY

Holiday exploits

WHY NOT let inflation pay for your holidays? It can be done, with a little skill and luck.

We've all seen how inflation has pushed up the value of the homes we live in. Over five years, house prices in Britain have risen an average of 80%—some have doubled, others have risen by less, depending on where you live. Most of us thank our lucky stars that we *bought* a house rather than fork out ever-rising rents.

But when it comes to going on holiday, most people still 'rent' a place to stay, whether it's a hotel room, an apartment in Spain, a seaside cottage or a modest caravan. Yet these things are also rising in value, to the benefit of their owners rather than visitors. So why not become an owner?

It needs careful planning: you must have cash to start, or be able to raise some perhaps by a further advance on the mortgage on your house. You may also have to spend some of your own precious leisure-time keeping your holiday home in good repair.

Certainly you will have to work out *all* the costs very carefully—interest charges, local rates or taxes, your advertising bills or commissions to a letting agent—and balance the outgoings against what you might reasonably expect to collect in rent from your customers during the season. You must also watch out for shady agents, and dishonest visitors or vandals abusing your property.

But, most of the time, you should be able at least to cover your costs, enjoy a few 'free' holidays yourself—and let inflation make your profits.

There are no end of ideas, but here are a few I've looked at...

Newly-built properties on the south coast of Spain range from £10,000 for a studio flat to £100,000 for a luxury villa. On top of that you must pay a premium for the special investment currency that you need to buy property abroad. It has been as high as 100%, doubling the cost of a purchase, but at one time this year it came down to around 25%.

Property developers lend buyers anything from 20 to 75% of the purchase price, usually over five to eight years, but at a pretty steep rate of interest—anything from 15 to 25%. So the less you have to

borrow, the more chance you have of making a profit.

Property tax and rates vary with the size of the place, as do service charges (which can go from £15 a month on a tiny apartment to £50 a month on a lovely villa). Reputable London agents reckon that Spanish properties may earn rents for at least seven months in 12 on a basis that brings in, roughly, an 8% return each year. Some villas fetch rents up to £1200 in August and £500 in out-of-season months.

Or how about a seaside flat or a cottage in Britain, where you don't have to pay a currency penalty? They can cost from £15,000 to £60,000, and some families can raise the money by re-mortgaging their present homes.

On the South Coast, they can usually be let out for five or six months of the year from £40 to £100 and more a week. Some people advertise them in national newspapers, or let word-of-mouth recommendations build up a regular clientele. Others leave it to a coastal letting agent to woo holidaymakers, collect the rent and look after the place. Sometimes a teacher, an air hostess or an American executive can be found to rent it through the winter months—a good way of keeping the place warm, dry and secure.

Many such properties rose in value by 40% last year, and look like putting on 10–15% in 1979. But don't forget that a 'second home' may be liable to capital gains tax.

Caravans are an idea for those with more modest ambitions. A new one can cost anything from £2000 for a 21-footer to £4000 for a 31ft job with all mod cons. You can get a decent secondhand one for about £1000, but it's less likely to keep or increase its value in inflation, as a brand-new one well might over four or five years.

You can often buy on a 20–25% down-payment, and pay the balance over four or five years at finance-company interest rates.

Choosing a good site is vital; transporting the caravan to it might cost £100; and connection charges—electricity, water and other services—anything from £100 to £1000. Site rents range from about £150 to £200 a year, and rates are often around £25 a year. Shop around for insurance.

Many good caravans are rentable for 12–15 weeks of the summer at between £60 and £100 a week, making something like £1000 rent a year. Site owners often arrange lettings at a commission of between 10 and 17%, for which they welcome visitors, arrange cleaners and watch out for vandals. A good site owner makes all the difference, so it's worth talking to people who already rent-out caravans.

ROBERT HEAD

Seeing's believing.

A four-door, five-seat, roomy, generously appointed saloon car for well under £2,000?

It takes some believing!... except that you can see it, explore it, test-drive it, and believe it completely – all in an hour, at any Skoda dealer.

Go round and convince yourself now.

SEE HOW SUMPTUOUS Nothing spartan about the Skoda Super Estelle. Through ventilation, directional heating, wall-to-wall carpeting, plenty of room for three in the back... headrests and reclining seats in all but one model... wide-opening doors (boon to the elderly)... independent suspension that takes the rough and gives you the smooth.

SEE HOW SAFE Dual circuit servo-assisted brakes. Disc brakes on the front wheels. 165 SR 13 radial-ply tyres. Mudflaps. Laminated windscreen. Door mirror. Locking petrol cap. Childproof locks.

In a collision the passenger compartment is like a strong-room surrounded by 'crumple zones' that soak up the shock; and the sideways opening bonnet can't fly open and unsight you.

SEE HOW DRIVABLE The AA 'Drive' report, quoted below, is independent witness to the Super Estelle's drivability. Good all-round visibility, logically positioned instruments in plain view,

"The driving position and control layout is businesslike and attractive: you don't have to contort yourself at the wheel, as in some small cars..."

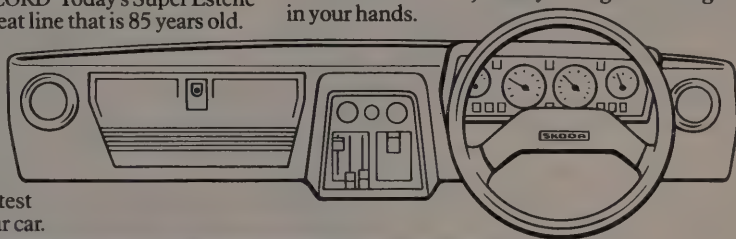
AA DRIVE MAGAZINE
JAN/FEB 1979.



finger-tip driver controls, body contoured seating make it a pleasure to drive. Test-drive it soon. As it parks in two feet over its own length, it's also a pleasure to park. Test-park it soon.

SEE THE TRACK RECORD Today's Super Estelle is the latest car in a great line that is 85 years old.

Today's Estelle is kin to the cars that have won their class eight times in the last eight RAC Rallies. The RAC is the toughest rally: the sternest practical test of components in your car.



SEE THE SENSE The Super Estelle is not just a showroom bargain, it's a bargain on the road. Your insurance is available at preferential rates through the special Skoda insurance scheme.

Your warranty is for 24 months, ask your dealer for details. And behind the dealer's service to you is ours to the dealer, from our parts and technical services centre at King's Lynn.

GRAB YOUR CHANCE! On a later page in this magazine is the comfortably large list of all our dealers. 270 of them. People who work for themselves, not for large organisations; who will therefore work very hard to keep you and your car happy. Call the nearest today, and fix yourself a test-drive. Do it now, while you've got this magazine in your hands.



From
£1,850*

SKODA SUPER ESTELLE

Skoda (Great Britain) Ltd, 150 Goswell Road, London EC1V 7DS. Telephone: 01-253 7441. Shown here is the Skoda Super Estelle 120LS. Top of the Skoda range of saloons, it costs £2,299.05. *Model prices are: 105S £1,849.77; 105L £1,949.22; 120L £2,049.84; 120LS £2,299.05. They include seat belts, car tax and VAT. Prices exclude delivery, number plates and road fund tax.



USED-CAR PRICE GUIDE

Flogging old hacks

TO A DEALER it's 'in need of a haircut', and to the buyer searching for a secondhand car it's one to avoid like the plague. In anyone's language, high-mileage cars are a gamble but, surprisingly, the odds against picking a winner are not as high as might be feared.

If a car has clocked-up most of its miles at a steady 70mph on Britain's motorways, and has been regularly serviced, it is probably just as sound as the low-mileage 'bargain' that may well have lurched around town for most of its life.

Town driving can be the kiss of death for a car: the engine has little chance to reach its correct operating temperature, and the life of its components is consequently shortened. On the open road, however, the engine can maintain a constant speed and temperature while brakes, suspension, gearbox and clutch are allowed to enjoy a lazy outdoor life. Bodywork, of course, should be no different in either case.

How long should an engine last? That's rather like asking the length of a piece of string. As one of our engineers puts it: 'People used to reckon that an engine should last 100,000 miles, but that strikes me as being over-generous where some makes are concerned. I think 70,000 to 80,000 miles would be a fairer figure for a small engine, whereas a lazy V8 could probably go much farther.'

Pensioned-off company fleet cars are often worth investigating. Their condition will depend largely on the company's servicing policy: has it been left to the individual to make his own maintenance arrangements, or do stricter rules apply? Ask to see the service book to find out, for example, whether that 50,000-mile-car is still on its first clutch.

If you're still in doubt, get the second opinion of an engineer. Ten minutes of his time with a compression tester should clear most doubts about an engine's useful life. You then have a sound basis on which to start haggling, using our price-list of 100 of today's most-popular secondhand models in the UK as a guide.

MAKE AND MODEL	AA Road Test Report No	Date	engine cc	mean top mph	acceleration 0-60 in sec	overall mpg	insurance group	MODEL YEAR Average secondhand price guide							
								1979	1978	1977	1976	1975	1974	1973	1972
								1979	1978	1977	1976	1975	1974	1973	1972
Alfa Romeo Alfased 1.3ti	D5/78	3/4 '78	1286	98	12.5	34.5	5	—	2775	—	—	—	—	—	—
Audi 80L	389	6/76	1297	91	14.2	31.75	5	—	3540*	2800	2255	1785	1440	1115	—
100LS	314/RI 139	19/75	1761	100	12.7	29.25	5	—	4505	3790*	2430	2030	1660	1290	1040
Austin Morris Mini 850	340	5/74	848	73	26.1	41.0	1	1870	1715	1480	1270	1050	900	785	650
Mini Clubman saloon	410	1/77	1098	82	18.2	40.5	1/2	—	2075	1785	1535*	1285	1090	940	795
Allegro 1300 Mk1 2-door	329	1/74	1275	86	16.0	34.75	2	—	2305	1970	1675*	1420	1200	1005	—
Allegro 1300 Mk2 4-door	377	2/76	1275	85	19.0	37	2	2630	2430	2075	1765	—	—	—	—
Allegro 1500 estate	RI 127M	19/75	1485	90	16.6	34.25	3	—	2830	2410	2040*	1720	—	—	—
Maxi 1750 Mk2	263	1/72	1748	90	14.6	28.75	3	3130	2825	2410	2035	1725	1445	1205	995
Princess 1800HL	397	8/76	1798	96	14.2	29.75	4	—	3445*	2480	2130	1810	—	—	—
Princess 2200HL	RI 129N	19/75	2227	105	12.7	26.5	4	—	3865*	2525	2130	1810	—	—	—
Marina Mk1 1800 4dr	295	1/73	1798	96	12.8	31.5	3	—	2610	2235	1905*	1610	1355	1140	950
MG Midget Mk3	205	2/70	1275	93	14.8	29.1	4	—	2400	2070	1745	1465*	1235	1040	880
MGB Mk3	243	4/71	1798	105	11.8	23.9	6	3565	3320	2850	2405	2030	1685	1415	1190
BMW 1602 Lux	363	1/75	1573	94	14.4	29.0	6	—	—	—	—	2030	1835	—	1140
520 i	327	12/73	1990	111	9.7	29.0	S/R	—	—	5795	4705	3790	3020	2380	—
Chrysler Sunbeam 1.6S	D6/78	3/4 '78	1598	95	13.9	33.5	3	—	2780	—	—	—	—	—	—
Avenger 1.3 2-door	337	4/74	1295	93	19.0	30.5	2	—	2420	2070	1515	1300	1100	940	—
Avenger 1.6GLS auto	339	5/74	1600	93	13.9	26.5	4	—	3050	2605	1975	1675	1370	1165	—
Alpine S	381	4/76	1442	97	14.3	32.0	5	—	3180	2795	2375	—	—	—	—
Hunter GL 4-door	234	1/71	1725	86.5	15.0	28.7	3	—	—	—	1755	1485	1240	1035	855
Citroen 2CV6	RI 118	19/75	602	66	37.2	44.0	1	1735	1485	1245	1045	885	—	—	—
Dyane 6	366	3/75	602	70	29.5	47.0	1	1865	1570	1315	1090	915	760	635	520
GS Club	384	5/76	1222	93	17.2	33.0	4	2525	2225	2030*	1505	1235	1000	815	645
CX2000	416	5/77	1985	107	12.7	29.25	6/7	—	3965	3245	2625	2255	—	—	—
Colt Lancer 1400GL 4-door	371	11/76	1439	94	12.9	34.0	5	—	2600	2180	1820	1505	—	—	—
Daf 66SL	317	9/73	1108	79	23.5	29.0	3	—	—	—	—	1000	835	695	—
Datsun Cherry 100A 4-door	284	8/72	988	83	17.7	41.25	3	—	—	—	1580	1345	1135	965	810
120Y coupé	336	3/74	1171	86	17.7	39.0	4	—	2400	2105	1795	1520	1285	—	—
Violet 140J	RI 132M	19/75	1428	94	15.5	32.0	4	—	2570	2075	1795	1475	1225	—	—
Bluebird 180B	316	8/73	1770	104	12.3	27.0	5	—	—	2145	1825	1540	1290	1080	890
Fiat 126	334/RI 138	2/74	594	62	60.0	48.5	1	—	1485	1275	1000	860	735	625	—
127 3-door Special	RI 137M	19/75	903	82	18.4	41.75	2	—	2150*	1635	1400	1185	—	—	—
128 4-door	320	9/73	1116	86	15.5	34.0	3	—	1990	1700	1450	1230	1035	875	725
131 1600S	369	6/75	1585	94	13.6	32.0	5	—	2985*	2340*	2000	1665	—	—	—
132 1800GLS	360	1/75	1766	102	12.0	25.0	6	—	—	—	1985	1625	1470*	1040	—
Ford Fiesta 1000HC	417	4/77	957	83	18.4	41.0	1	—	2090	1925	—	—	—	—	—
Escort 1100 Popular	RI 136M	19/75	1097	77	23.6	35.0	1	—	1925	1750	1510	1300	—	—	—
Escort 1300XL 4-door	292	11/72	1297	88	16.0	31.0	2	—	2645	2345	2020*	1495	1290	1100	940
Cortina Mk3 1600XL 4-door	323	10/73	1593	95	15.1	27.0	3	—	—	—	1945	1655	1410	1200	1000
Cortina 2000E estate	347/RI 116	19/74	1993	99	12.3	27.5	5	—	—	—	2535	2150	—	—	—
Cortina Mk4 1600	404	12/76	1593	89	15.3	27.0	3	—	2740	2535	—	—	—	—	—
Capri Mk2 1600GT	342	6/74	1593	102	12.4	27.5	5	—	3620*	2915	2515	2170	1945	—	—
Capri 3000 Ghia auto	RI 114	19/74	2994	113	9.9	22.0	6/7	—	5100*	4290	3605	3020	2625	—	—
Granada 3000GXL auto	282	6/72	2994	108	11.7	21.0	8	—	7080*	4580	3740*	2480	1910	1440	1015
Honda Civic 1200 3-door	362	3/75	1169	86	14.7	34.75	4	—	2240	1990*	1625	1380	1160	—	—
Accord auto	420	5/77	1600	89	14.7	32.0	5/6	—	3430	2885	—	—	—	—	—
Jag/Ro/Tr Jaguar XJ6 4.2	227	10/10	4235	117	10.0	16.75	6/7	—	9455	7850	6115	4805	3890*	2380	1985
Jaguar XJ12 (L) auto	305	4/73	5343	136	7.6	13.0	7	—	10175	8565	7080	4955*	3665	2280	—
Rover 2200SC	324	11/73	2205	104	12.2	24.0	4	—	—	3540	2875	2380	1985	—	—
Rover 3500 auto	330	2/74	3528	112	11.1	20.5	5	—	—	—	3470	2750	2230	1735	1390
Range Rover	252	1/71	3528	101	13.2	18.0	5	—	9705	8490	7525	6265	5125	4260	3470
Triumph Toledo 4-door (Dolomite)	345/RI 150	19/77	1296	83	19.8	33.0	2/3	—	2640	2245	1905*	1455	1240	1065	910
Triumph Dolomite 1850	288	9/72	1854	100	11.4	28.25	4	—	3345	2825	2500*	1935	1610	1340	1090
Triumph 2000 Mk2	219	6/70	1998	95	15.0	26.0	4	—	—	3195	2650	2280*	1910	1340	1090
Triumph 2500TC	RI 112	19/74	2458	101	11.5	27.0	5	—	—	3490	2850	2430*	1935	—	—
Triumph Spitfire 1500	376	2/76	1493	97	12.5	35.25	5	—	2730	2360	1985	1665	—	—	—
Triumph Stag	273	3/72	2997	118	10.2	22.5	S/R	—	—	5255	4285	3490	2825	2255	1785
Triumph TR7	401	11/76	1998	108	10.2	28.75	6	—	3665	2925	2480	—	—	—	—
Lada 1200	355	9/74	1198	91	15.0	33.25	3	—	1650	1400	1170	985	815	—	—
Lancia Beta 2000	RI 171	19/78	1995	107	11.2	26.5	6/7	—	3515	2950	—	—	—	—	—
Mazda 1000 2-door	343	6/74	985	78	20.0	33.5	3	—	—	1480	1260	1060	900	—	—
1300 hatchback	424/4D/78	7/78	1272	89	15.9	36.5	4	—	2335	1990	—	—	—	—	—
Opel Kadett S estate 3-door	338	5/74	1196	84	16.7	32.0	4	—	2560	2375*	1880	1595	—	—	—
Ascona 1.9SR	302	3/73	1897	96	12.3	25.5	6	—	3615*	2895*	2420*	1860	1505	1220	—
Rekord 4-door	287	8/72	1897	101	12.0	26.0	4	—	—	2575	2155*	1785	1465	1215	1015
Peugeot 104 4-door	325	11/73	954	84	17.3	36.5	3	2330	2105	1830*	1555	1335	1140	990	—
304	386	5/76	1290	92	16.7	35.5	3	—	2645	2295*	1915	1595	1330	1110	920
504GL	RI 140	19/76	1971	99	13.7	27.5	5	4235	3765	3230	2675	2205	1835	—	—
504 estate	275	4/72	1971	98.5	13.8	24.5	5	—	4385	3840	3220	2675	2230	1860	1510
Reliant Robin	365	3/75	748	72	19.6	47.0	2	—	1680	1495	1315*	1140	1010	—	—
Scimitar GTE	303	3/73	2994	118	9.1	21.25	7	—	6215	5150	4260	3445	2850	2380	1935
Renault 4TL	RI 121	19/75	845	74	26.4	39.0	1	2160	1980	1685	1420	—	—	—	—
5TL	349	8/74	956	85	19.7	42.0	2	2415	2250	1935	1630	1380*	1160	990	—
5TS	370	11/75	1289	93	13.3	36.25	4	—	2620	2240	1920	1635	—	—	—
6TL (T100)	384	3/75	1108	82	17.9	37.75	3	—	2340	2000	1690	1425	1190	—	—
12L	385	5/76	1289	82	18.1	34.5	3	2590	2330	1990	1690	1440	1200	1000	880
15GTL	D5/78														

Sitting's believing.

The Skoda Super Estelle is a car built for comfort. There's plenty of room for five. The ride – thanks to the independent suspension – is serene. Four doors lend a little dignity to entrances and exits. And all-round visibility makes it a joy to be driven in, as well as a joy to drive. Test it, in the showroom and on the road, for the built-in pleasure that comes with every Super Estelle.

ENJOY THE GOING Whether you're going to the shops or further afield, the Skoda Super Estelle's body-contoured seating and excellent all-round visibility makes for tireless motoring. Enjoy the security of dual circuit servo-assisted brakes, with discs at the front, and the firm, sure tread of 165 SR 13 radial-ply tyres.

ENJOY THE STOWING Stow the luggage and forget it. There's 9.8 cubic feet under the bonnet which opens sideways, so it's more get-at-able. Even then, there is additional room for hand luggage behind the rear seats. Or, if there's only two of you but lots of cargo, fold down the back seats and make another 12 cubic feet.



ENJOY THE FIXTURES AND FITTINGS All the following are in the price of the car, so enjoy not having to pay extra for them... Front seat belts, laminated windscreen, two-speed directional heating, mudflaps, hazard warning light, and childproof door locks. To say nothing of headrests and reclining seats in the three top models in the range.



ENJOY THE TOUCH OF CLASS Skoda comes from a long line of motor engineering tradition that stretches back 85 years. The marque has class. And it proves it by winning its class in international rallies: eight times out of the last eight in the toughest of all – the RAC Rally. But the Skoda owner is the real winner, because he gets a car built to perform, built to enjoy, above all built to last.

...AND IT'S SUCH A GREAT DEAL – FROM SUCH GREAT DEALERS! The deal is one you couldn't beat anywhere. Start with the price. Then look at the warranty: 24 months (ask your dealer for full details). Then look at Skoda's preferential insurance rates: your dealer will go into that, in full. On top of which, our dealers are quite something too. There are 270 of them, which is a comfort if you are far from home. They are mostly family concerns, so they bring enthusiasm and a personal touch to the way they look after their customers.

And we in turn look after them from our well-stocked parts and technical services centre at King's Lynn.

FIX A TEST-DRIVE TODAY. Find your nearest dealer from the list on a later page in this magazine and call him. He will be delighted to offer you a test-drive, and you will be delighted...

"...the seats' comfort with all their various permutations to accommodate the impedimenta of family life, are impressive, too... Leg-room all round is good, and another rear passenger perk is a supply of warm air to the rear footwells."

AA DRIVE MAGAZINE JAN/FEB 1979

From
£1,850*

SKODA SUPER ESTELLE

Skoda (Great Britain) Ltd, 150 Goswell Road, London EC1V 7DS. Telephone: 01-253 7441. Shown here is the Skoda Super Estelle 120LS. Top of the Skoda range of saloons, it costs £2,299.05. *Model prices are: 1055 £1,849.77; 105L £1,949.22; 120L £2,049.84; 120LS £2,299.05. They include seat belts, car tax and VAT. Prices exclude delivery, number plates and road fund tax.

touch, balance all day long, never leaving them with nothing to do.'

As a further stage in the rehabilitation of head-injury victims, Birmingham Accident Hospital runs a work centre (the only one of its kind in the country), where about 35 people at a time can be kept busy making wooden boxes and simple toys. Many of the patients are later able to return to some form of work outside. For others, it will be the only occupation they know for the rest of their lives. The most difficult cases are those where the patient's personality has changed.

Henry Kinchin, manager of the centre, says: 'Often they are young married men. They go home to find that the wife has had to change roles and become the breadwinner; they resent this and get loud-mouthed and aggressive. Nine times out of 10, it ends in divorce, with the man going back to mother. And that can make things even worse, because *she* won't let him do anything for himself.'

Bill, who has been attending the centre since 1968, was fortunate that his wife Joan was prepared to stand by him after his accident, even living in the same ward. Now 52, Bill was a central-heating engineer, on the way back from Corby, Northamptonshire, when the van in which he was a passenger collided with a lorry.

The force of the impact smashed his toolbox into the back of his head, taking three inches of bone out of his skull. It was six months before he could walk, and a year before he could speak: 'The wife sat me in a chair and said words to me and all I could do was make noises.' Now, 12 years after his accident, Bill has no sight in one eye, his balance is so poor that he cannot walk far without sticks, and he is unable to hold anything in his left hand. His £35,000 compensation—for which he waited seven years—seems irrelevant.

For Tim, another patient at the work centre, his accident had a certain irony. During his time as a regular soldier, he saw service in notorious trouble-spots such as Cyprus and Northern Ireland, and survived without a scratch; he was knocked

down by a car while crossing the road in Birmingham. He was so badly injured that a priest was called to give him the last rites, and it was six weeks before he regained consciousness. When, eventually, he was able to go home to his wife and two children, he had to be dressed, fed, waited on hand and foot: a traumatic experience for the family.

Three years later, Tim can still walk only a few yards. His speech is clear but slow and disjointed. He realises that making boxes at the work centre would barely stretch his 10-year-old son—but it gets him out of the house. For a once-active man, soldier, heavy-goods-vehicle driver and coach to a pub football team, the immobility is one of the worst things that could have happened.

Road accidents are probably the biggest single cause of permanent disability, yet surprisingly little is known about the nature and extent of the problem. Even the Department of Health and Social Security, which ultimately has to pick up many of the bills, does not distinguish road-accident victims from other categories of disabled people.

What evidence does exist suggests that, for every person killed on the roads of Britain, more than twice as many are left permanently maimed. The total is in the region of 16,000 cases a year, of which perhaps 5000 can be classed as severe—suffering incurable brain damage, loss of an eye, major amputation, poor hearing or serious limitation of movement.

These unofficial estimates—there are no official ones—are derived from one of the few pieces of systematic research into the long-term consequences of road accidents. Dr Bull and two colleagues at Birmingham Accident Hospital analysed a year's admissions to the hospital, and followed up the cases over the next eight years.

They found that 21% of the people admitted as in-patients suffered permanent disability, of which more than half were less than 30 years old at the time of injury. The Birmingham study also revealed the vulnerability of certain types of road-user. Nearly 80% of the perma-

nently maimed were motorcyclists—the biggest single category—pedestrians or pedal-cyclists. Vehicle drivers and passengers accounted for the remaining fifth of the victims.

More work needs to be done, and urgently. That much is admitted even by the government's own research arm—the Transport and Road Research Laboratory. A report published by the TRRL in February called for 'more consistent, more realistic and more complete reporting of injury severity in the national road-accident statistics'.

Such information, the report went on, would enable better assessments to be made about the effectiveness of accident-prevention measures, notably aspects of vehicle design. There is virtual unanimity in the medical profession that seriously disabling injuries would be greatly reduced if everyone wore seatbelts: but what about the 80% of permanently maimed who, according to the Birmingham study, were not in cars?

What more protection might be given to motorcyclists? (The effectiveness—or otherwise—of crash helmets is currently being investigated by a team of consultants and scientists at the London Hospital Medical College.) Can vehicles be better designed to mitigate injuries to the most exposed road-user of all—the pedestrian? Is the hospital service being organised in the most efficient way to deal with the 80,000 people admitted each year as in-patients after road accidents?

Since the cost of road accidents to the community was officially estimated in 1977 at £1287million, there is a compelling financial argument alone for trying to find answers to these questions even if you or yours are physically unaffected.

At the end of the day, however, it is the human side that impresses far more than any statistics. To see young people like Kathy and Michael cut off in the prime of life and left to struggle for faculties that the rest of us take for granted is harrowing. To look after Kathy or Michael is heartbreaking. To be Kathy or Michael is truly awesome. PETER WAYMARK



INSURANCE Funny business

AFTER NINE YEARS of waiting in the wings, David Carter moved into his boss's chair to manage the marketing of an up-and-coming engineering company. He enjoyed all the perks of a high-flying

executive, not least the choice of a company car up to £6000. He decided on a Ford Granada, and was soon clocking-up a high mileage in his frequent sorties.

David's wife, meanwhile, kept their elderly Mini 1000 for shopping and trips to the local schools, and its use was described on the proposal form as being social, domestic and pleasure.

David's troubles began on the day he loaned his Granada to a colleague. He'd just settled down at his desk to tackle a backlog of paperwork when a phone call from a subsidiary firm some 50 miles away sent him running for his wife's Mini.

He later admitted to friends that he simply hadn't seen the motorcyclist crossing the road junction; it seems doubtful, too, whether

its rider had seen David's Mini . . .

David was shaken but not hurt and, luckily, the motorcyclist survived better than his machine, so he set about the formalities. He notified his insurers, promising to send them all correspondence relating to the claim and enquiring politely if he might eventually re-imburse them in order to protect his no-claims discount.

It looked like plain sailing. His company had a 'knock-for-knock' agreement with the motorcyclist's company, and it was agreed that each firm would cover the damage for its own customer.

But, in David's case, his insurer decided that there was not going to be a settlement. The company pointed out that he had been using the Mini for business purposes—and Carter could not deny that

he was 'outside the terms of the certificate'. He had to pay a repair bill for more than £200—a cheap lesson for a comfortably off man.

AA insurance-claims expert Bryan Hunt has heard it all before. Usually, he says, the trouble is caused not by drivers trying to cut their insurance costs dishonestly but by their carelessness. 'For example, your original insurance proposal may name only yourself and your wife,' says Hunt. 'Then, over the years, your baby boy grows up to be a rallydriver.'

'Claims can also be thrown out because the insured person starts negotiations with the other side and then, finding himself in hot water, passes the buck to the insurer. Because the company's position has already been prejudiced, it is unlikely to pay up.'

Driving's believing.

As a rule you expect low-priced cars to slog along dutifully and get there eventually, but be no great joy to drive. So the Skoda Super Estelle will come as a pleasant surprise. It manoeuvres neatly, parks sweetly, and handles fluently through the gears. It's bred from a long line of rally-toughened winners. Test-drive any Super Estelle, and you will know at once that here is a car to enjoy.

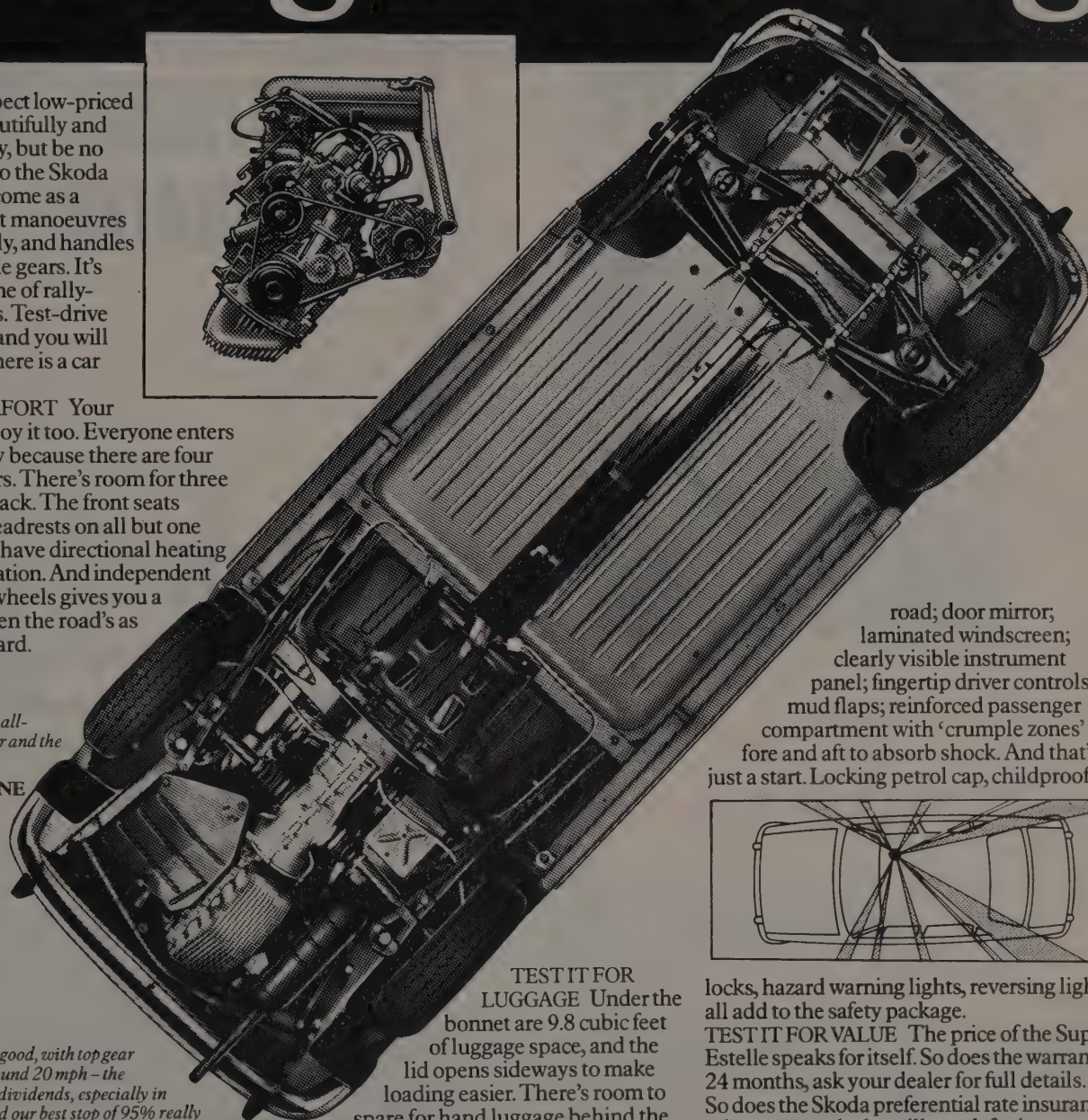
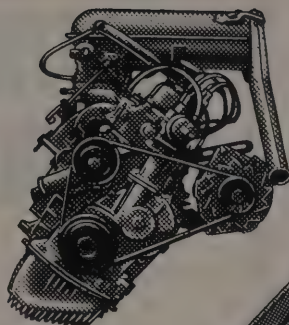
TEST IT FOR COMFORT Your passengers will enjoy it too. Everyone enters and exits gracefully because there are four wide-opening doors. There's room for three grown-ups in the back. The front seats recline and have headrests on all but one model. All models have directional heating and through ventilation. And independent suspension on all wheels gives you a ride like a glide when the road's as rough as a washboard.

"A squared-up shape allows the driver a good all-round view of his own car and the world outside."

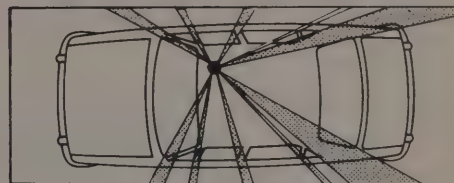
AA DRIVE MAGAZINE
JAN/FEB/1979.

"Low-speed flexibility is good, with top gear pulling happily from around 20 mph – the addition of a servo pays dividends, especially in gentler checkbraking, and our best stop of 95% really is quite remarkable for a rear-engined car with an unladen front boot."

AA DRIVE MAGAZINE JAN/FEB 1979.



road; door mirror; laminated windscreen; clearly visible instrument panel; fingertip driver controls; mud flaps; reinforced passenger compartment with 'crumple zones' fore and aft to absorb shock. And that's just a start. Locking petrol cap, childproof



TEST IT FOR LUGGAGE Under the bonnet are 9.8 cubic feet of luggage space, and the lid opens sideways to make loading easier. There's room to spare for hand luggage behind the rear seats. Or – for jumbo loads – you can fold the back seats down and make an extra 12 cubic feet.

TEST IT FOR SAFETY Dual-circuit servo-assisted brakes, discs at front; 165 SR13 radial-ply tyres, giving plenty of tread on the

locks, hazard warning lights, reversing lights all add to the safety package.

TEST IT FOR VALUE The price of the Super Estelle speaks for itself. So does the warranty: 24 months, ask your dealer for full details. So does the Skoda preferential rate insurance scheme: your dealer will speak for it too, and explain all the facts.

TEST ALL THESE PROMISES NOW There are 270 Skoda dealers – a reassuringly large number. Mostly they are family businesses offering a personal service. Just as they'll back you with whatever you need, so we back them: our parts and technical services centre at King's Lynn is one of the newest and smartest in Europe. Call your nearest Skoda dealer now (see later page) and fix yourself that test-drive. He'll be delighted to see you, and you'll be delighted you did it.

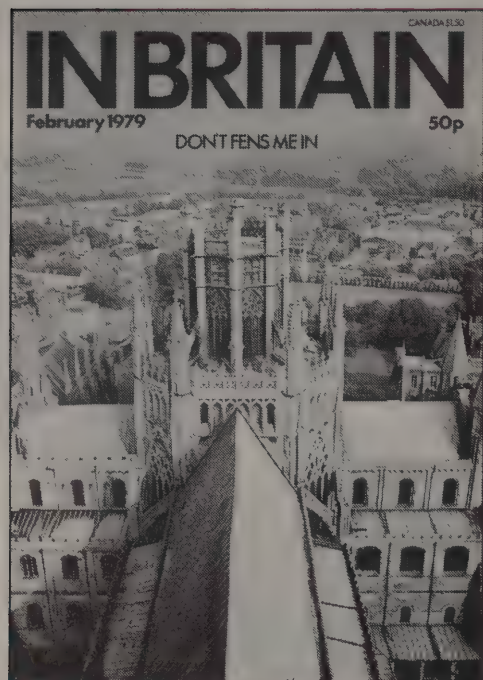


From
£1,850*

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Travel For a Year IN BRITAIN



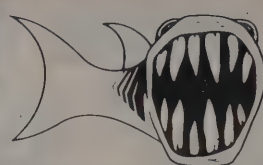
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Built for comfort and built for the road, the Thomson T-Line range has proved itself year in and year out all over the world.

This year we've taken the tried and tested Glen range and produced two separate series, the Glen "S" and the Glen "GL". Both feature the layout expertise you would traditionally expect from Thomsons, complemented by a distinctive new three-tone exterior colour scheme.

And all with built-in features, many of which would come as optional extras on competitive makes.

With seven models to choose from in each series, there is a caravan to suit every family and every pocket.

To see just how suitable T-Line would be for you, write for free colour brochure and list of stockists to-

THOMSON T-LINE CARAVANS
Thomsons (Carron) Limited, Falkirk, Scotland

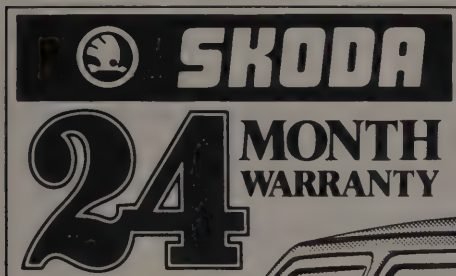
Adding up's believing.

The Skoda Super Estelle, a range of four door, five seat saloon cars priced from £1,850. Beat that! Here are the unbeatable values that make up the Super Estelle range:

Model	Engine Size	Total Price
105S	1046 cc	£1,849.77
105L	1046 cc	£1,949.22
120L	1174 cc	£2,049.84
120LS	1174 cc	£2,299.05

*All prices quoted ex-works and include seat belts, car tax and VAT. Delivery charge, number plates, road fund tax extra.

On top of that we offer a 24 month warranty, ask your dealer for the full details.



On top of *that* we have a special Skoda insurance scheme at preferential rates which your dealer will explain.

On top of *that* ... all the things you get:

YOU GET PEDIGREE At Skoda we trace our ancestry back through 85 years. If that makes us enthusiastic about good quality and reliability, if it means we over-engineer, so much the better for Skoda owners.

They get the benefit of cars whose components have been tested in international rallies. Skoda has come first in its class in the last eight RAC Rallies. That's pedigree.

YOU GET COMFORT Four wide-opening doors, so you can get in and out without a struggle. Room for five without a squeeze. All-round independent suspension to smooth out the rough going. Reclining seats and headrests on all but one model. Two-speed directional heating and through ventilation.

That's comfort.

From
£1,850*

YOU GET SAFETY AND SECURITY You get dual circuit servo-assisted brakes, with discs on the front wheels. 165 SR 13 radial-ply tyres, so there's plenty of tread on the road.

Door mirror; unobscured instrument panel; unobscurable forward vision, because the bonnet lid lifts sideways and cannot suddenly unsight you. That's safety.

Locking petrol cap, childproof door locks. That's security.

YOU GET SERVICE - ALMOST ALWAYS WITH A SMILE It's good to know there are all of 270 Skoda dealers to make a good big nationwide network.

It's better still to know that they are family businesses where personal service (with a smile - why not?) is what it's all about. They look after their customers just as we look after them: from our parts and technical services centre in King's Lynn - one of the newest in Europe.

Add all that lot up, and there's only one possible answer: **Make a phone call now.** Your nearest dealer and his phone number are on a later page in this magazine. Book yourself a test-drive before everybody else does!



"There's no denying the Estelle's showroom appeal. It's unquestionably a lot of car for the money."

AA DRIVE MAGAZINE
JAN/FEB 1979.

SKODA SUPER ESTELLE

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Views to air? Tell DRIVE about your motoring and what it means to you. You can send letters for publication—unstamped—via DRIVE Directory, FREEPOST, Basingstoke, Hampshire RG21 2EA

Us v bus

It's about time that motorists made a united stand against the increasing disregard for other road-users shown by bus drivers. I have just reported to the police a bus that blatantly cut me up on a Plymouth roundabout. They tell me that this kind of complaint comes in regularly, but, unless there is an independent witness, there is little chance of a conviction.

Perhaps if fellow-motorists stopped and supplied such evidence, it would keep bus drivers in line.

Steve Clare
Stoke, Plymouth

Zero rated

DRIVE's 'Countdown to rip-off' (March-April) just goes to prove that if someone really sets out to be dishonest, nothing will deter him: with the outlawing of running back the car speedometer

odometer, the villain dreams up the idea of the zeroing fiddle.

But why haven't the speedo manufacturers counteracted this 'clocking'? It can be done. The revolution-recorder of a marine engine, for instance, does not subtract when it is run astern.

Alternatively, the odometer could be fitted with a slipping clutch and another two digits. This way, 10 million miles would have to be run off to obtain a low mileage.

James W Robson
Newcastle upon Tyne

Small is beautiful

Small petrol stations are closing at what can only be described as an alarming rate because they cannot compete with the large combines. In fact, in the village next to mine, the garage has just stopped selling petrol because motorists can drive eight miles farther, buy two gallons, and still make a saving on the local price.

But when the small garages have gone and the big boys take over, who'll be making the savings?

E Milsom (fitter,
24-hour garage)
East Harling, Norwich

Refuse offers?

Our dustmen are very choosy

about what they will take, so much so that they go to the trouble of looking through each bin's contents. And one item that's guaranteed to be left behind is waste engine oil. I suppose I could take it to a local garage, but it seems cheeky when I buy oil at a discount from a supermarket. What do other DRIVE readers do?

G Morley
Basingstoke, Hants

Getting an even brake

As one of the UK's leading suppliers to the brake-replacement market, with technical approval from all the leading manufacturers, my company, in common with other British manufacturers, has conducted exhaustive investigations of many imported pads and linings—and our results have been every bit as alarming as those obtained by your research (DRIVE, March-April).

A major problem that we have noticed is the marking and packaging of some imported materials: often, these bear no quality stamps, and carry no guarantee of quality consistency.

Not even price is a completely safe guide when buying foreign pads. We have detected cases of low-quality foreign makes being offered cheaply in one place, and

at the same price as reputable British brands in another. The safest advice to all motorists, when having brakes replaced, is to insist on a good quality material, bearing a reputable British trade name.

J F H Main
Chairman, Trist Draper Ltd
Bristol

Constructive criticism is a good thing, but, in matters as important as life and death, your investigation into brake pads should, in my opinion, have been the subject of a properly conducted test programme. Then, the so-called 'cheapies' could have been evaluated against their better-known counterparts.

My company markets one of these 'cheapies' under the Sibrex label, and the disc pads are produced to the exacting standards of a well-known foreign manufacturer from whom test data is available. I would be among the first to agree that there are some inferior pads on the market which it would be in all our interests to see off. But not at the expense of all. Cheapness is not necessarily inferior, nor expensive superior.

K C Oliver
Director, Allspares
Alton, Hants

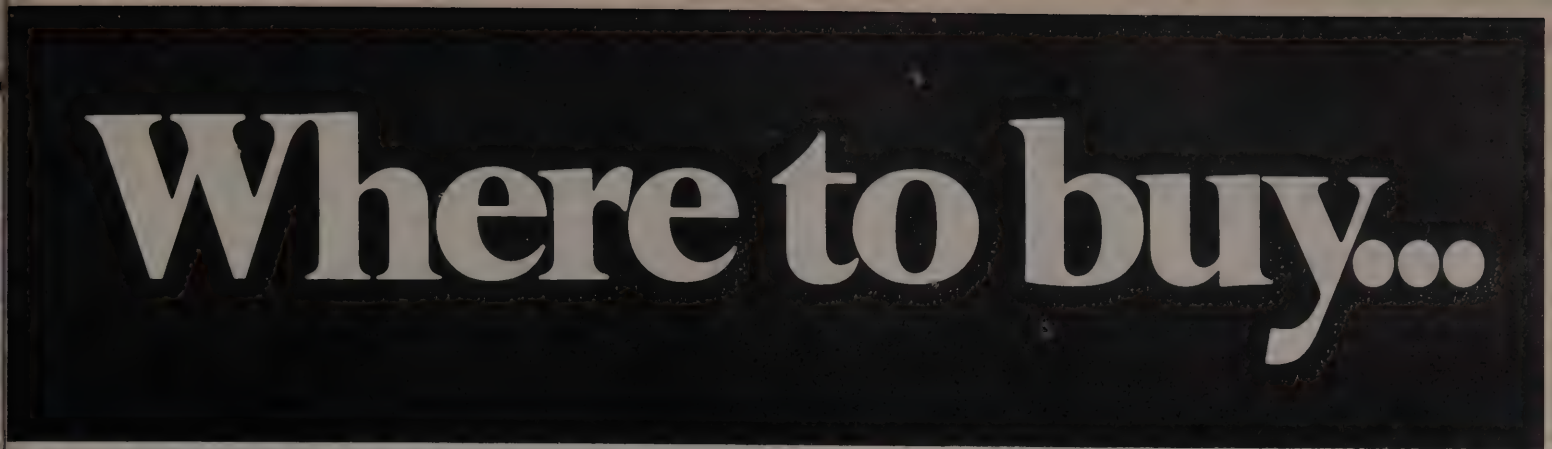
BREAKDOWNS DON'T ONLY HAPPEN TO OTHER MOTORISTS.

Sooner or later it will happen to you.

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Frank Voleys Cars, Bristol.
Tel: Bristol 659356/556469.
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Fork Service Station Ltd., Bleadon.
Tel: Weston-super-Mare 812244.

BEDFORDSHIRE
Howes Motors, Eaton Bray,
Dunstable.
Tel: Eaton Bray 220508.
Lane's Motors (Luton) Ltd.
Tel: Luton 51451/2.

BERKSHIRE
Risley Garage, Reading.
Tel: Reading 883147.
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Hamstead Norreys, Newbury.
Tel: Hermitage 201252.
Hardings of Windsor.
Tel: 07535 6371.
Shurlock Row Garage, Nr. Twyford.
Tel: Shurlock Row 354.

BUCKINGHAMSHIRE
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Aston Clinton.
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Desborough Park Service Station,
High Wycombe.
Tel: High Wycombe 30113.
Gardner & White,
Stoke Goldington.
Tel: Stoke Goldington 387/8.
River Garage Ltd., Milton Keynes.
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Stoke Poges.
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CAMBRIDGESHIRE
Camcore (Peterborough) Ltd.,
Covington.
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Downham Garage, Downham.
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Wisbech Road Garage, March.
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Parker-Fry Garages Ltd.,
Stanground.
Tel: Peterborough 43393.
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Tel: Trumpington 2123.
Walton Motor Co. Ltd.,
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Tel: Wisbech 5945.

CHESHIRE
Compact Car Co., Widnes.
Tel: 051-424 4073.
Derek Warburton Ltd., Stockport.
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Knottfold Service Station, Hyde.
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Three Ways Garage Ltd.,
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Tel: Runcorn 72603.
L. A. Weller Ltd., Great Moor,
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Tel: 061-483 2429.

CLEVELAND
George Toomey (Cleveland) Ltd.,
Eaton, Middlesbrough.
Tel: Eaton Garage 2436.
M.P.C. Ltd., Hartlepool.
Tel: Hartlepool 75482.

CORNWALL
Ayr Garage, St. Ives.
Tel: St. Ives 6152.
Roseland Motors, Verran, Truro.
Tel: Verran 347.
J. B. Smith & Son (Launceston) Ltd.,
Tel: Launceston 2478/9.

CUMBERLAND
Prospect Garage, Nr. Aspatria,
Carlisle.
Tel: Aspatria 20555.
Stoncroft Service Station,
High Hesket, Carlisle.
Tel: 099-93 661/2.
Stoncroft, King Street, Carlisle.
Tel: 0228 29563.

DERBYSHIRE
Chapel Motors,
Chapel-en-le-Frith.
Tel: Chapel-en-le-Frith 2139.
Clock Garage, Spendon.
Tel: Derby 63359.
Premier Garage, Heanor.
Tel: Langley Mill 2887.
Sandybrook Garage,
K. F. & B. Miles, Stoney Cross,
Spondon.
Tel: Derby 6123.

Skoda of South Normanton.
Tel: Ripley 811251/811409.
Travellers Service Station,
Clowne.
Tel: Clowne 810619.

DEVON
J.D.S. Vehicles Ltd.,
Kingskerswell, Nr. Newton Abbot.
Tel: Kingskerswell 4114.
C. & H. Motor Co. Ltd., Mutley.
Tel: Plymouth 65771.
P. Gillard Motors Ltd., Ellacombe.
Tel: Torquay 23938.
Mid-Western Car Sales,
Nomanland, Tiverton.
Tel: Witheridge 538.
Station Garage (Topham) Ltd.,
Tel: Topham 3129.
White's Western Modern Garage,
Newton Abbot.
Tel: Newton Abbot 4473.
Yeo Garage, Barnstaple.
Tel: Barnstaple 3329.

DORSET
Oakdale Service Station, Poole.
Tel: Poole 5366.
Pokesdown Garage, Pokesdown.
Tel: Bournemouth 424166.

DURHAM
Dennis W. Lee, Consett.
Tel: Consett 502492.
Hilltop Garage, Sherburn Hill.
Tel: Durham 720221.
Langley Car Centre,
Langley Moor.
Tel: Durham 780195.

ESSEX
Newton Motors, Goodmayes,
Iford.
Tel: 01-599 2337/5901831.
Wakering Engineering Co. Ltd.,
Halstead.
Tel: Halstead 7212/3.
Service Dealer:
Glovers Motors, Witham.
Tel: 01975 613373.
Gordon Motors, Grays.
Tel: 0375 78044.
Coles-Tyler Garage, Copford.
Tel: Colchester 210422.
Prince Avenue Service Station,
Southend-on-Sea.
Tel: 0702 32833.
Redwings Service Station,
Chelmsford.
Tel: 0245 51758.
Safeway Cars, Harlow.
Tel: 0279 22611.
Simco, Station Garage,
Brentwood.
Tel: 0277 214826.

GLoucestershire
Regional Motor Co. Ltd.,
Gloucester.
Tel: Gloucester 29291.
Stoke Orchard Garage Car Sales,
Cheltenham.
Tel: Cheltenham 22621.
Sow-on-the-Wold Motors Ltd.,
Flossow.
Tel: Sow-on-the-Wold 30699.
Stoke Orchard Garage,
Cheltenham.
Tel: 01753 1781/1581.
Tel: 01753 1731.
D.N. Car Sales, Hackney Road, E2.
Tel: 01-739 1731.
Empire Motors, West Ealing.
Tel: 01-567 3535/8432.
Eros Service Station, Brockley.
Tel: 01-691 0028/9.
Featherstone Garage, Mill Hill.
Tel: 01-959 2665.
Humphries Garage
(Hemel Hill) Ltd.
Tel: 01-733 3222.
International Cars Ltd.,
North Circular Road.
Tel: 01-888 5165.
Lanes Motor Sales (Kenton) Ltd.,
Harrow.
Tel: 01-204 8111/2.

Newton Motors, Hackney.
Tel: 01-986 9868.
W. & M. Motors Ltd., Highams Park.
Tel: 01-527 7568.

GREATER MANCHESTER
Schen Motors (Firswood) Ltd.,
Old Trafford.
Tel: 061-881 8112/3/4.
Barnal Ltd., Leigh.
Tel: Leigh 604457.
Beside Motors Ltd., Ellacombe.
Tel: Torquay 23938.
Parkside Car Sales (M/cr) Ltd.,
Aldershot.
Tel: 061-336 1511.
Premier Motor Co., Mossley.
Tel: Mossley 2560.
Scouthead Garage, Oldham.
Tel: 061-633 2862.

Hampshire
Copnor Car Exchange Ltd.,
Copnor.
Tel: Portsmouth 61941.
Gardian Motors Ltd., Aldershot.
Tel: Aldershot 31818/31819.
Service Dealer:
Ideal Garage, Micheldever.
Tel: Micheldever 313.
Gardian & Wilson Ltd.,
Southampton.
Tel: 0703 27744.
Lees (B. W. & M.) Ltd.,
Bishops Waltham.
Tel: Bishops Waltham 2360.
Lees (B. W. & M.) Ltd., Meonstoke.
Tel: Droxford 404.
Over Wallop Coachworks,
Stockbridge.
Tel: 026-478 356.
Station Road Garage,
Sway, Nr. Lymington.
Tel: 059-068 2209.

HEREFORD AND WORCESTER
Hylton Road Garage, Worcester.
Tel: 0905 422931.
Tanyard Garage, Alvechurch.
Tel: 021-445 1752.

Hertfordshire
Adeyfield Garage, Adeyfield.
Tel: Hemel Hempstead
52515/42396.
Service Dealer:
Garden City Coachworks Ltd.,
Hatfield.
Tel: Hatfield 63877.
Monaco Garages Ltd., Watford.
Tel: Watford 24491.
Tucker-Peake Cars (Stevenage)
Shefford & Crowe Ltd.
Tel: Stevenage 54361/2.

HUMBERSIDE
Epworth Car Centre, Epworth
Tel: Epworth 873033.
High Cliff Motors Ltd., Grimsby
Tel: Grimsby 57362.
L. Mauldon & Sons, North Ferry
Tel: Hull 634366.
Rainfords of Ashby Ltd.,
Scunthorpe.
Tel: Scunthorpe 4146.

ISLE OF WIGHT
Mill Road Garage, Yarmouth
Tel: 0983 760 436.

KENT
Dawson Motors Ltd., Pembury,
Tunbridge Wells.
Tel: Pembury 3111.
Central Garage, Birchington
Tel: Thanet 41701.
B. T. J. Dimond Ltd., Dartford
Tel: Dartford 20372.
Hillside Garage,
Birling, Nr. Ashford
Tel: Wye 812316.
Julians & Snowdon Ltd., Meopham
Tel: Gravesend 813562.
Keeler & Mullett,
Batham, Canterbury
Tel: 022-782 361/334.
Loose Road Service Station Ltd.,
Maidstone.
Tel: 0622 52584.
G. A. E. Newbery & Sons
(Faversham) Ltd.
Tel: 079-582 3764/4566.
Pinewood Garage, Sevenoaks
Tel: 0732 54293/52653.
Rosherville Garage Ltd.,
Northfleet.
Tel: Gravesend 67462.

Sheerness Motors, Sheerness
Tel: 079-56 2730.
Sherlodge Service Station,
Wigmore, Gillingham
Tel: 0634 31688.
Sidcup Auto Services Ltd., Sidcup.
Tel: 01-300 2450.
F. Tippen & Son Ltd.,
Ham Street Garage,
Tel: Ham Street 2207.

LANCASHIRE
UHT (Car Distributors) Ltd.,
Preston.
Tel: Preston 749491.
DVS Ltd., Darwen.
Tel: Blackburn 75272.
Harrowside Motors Ltd.,
Blackpool.
Tel: Blackpool 41081.
Leyland Service Station, Leyland.
Tel: Leyland 21546/23797.
Malmes Motors, Bury.
Tel: 061-761 1416.
Phil Davies Car Centre
(Crossroads Bolton) Ltd.
Tel: Bolton 852151.
R. Pilkington (Bolton) Ltd.
Tel: Bolton 24582.
Queen Street Garage,
Gt. Harwood.
Tel: Gt. Harwood 887088.

LEICESTERSHIRE
Albar Autos, Leicester.
Tel: Leicester 61135.
Albar Autos, Mountsorrel.
Tel: Leicester 303055.
G. T. Booth Motors Ltd.,
Broughston.
Tel: Sutton Elms 282247.
Remington Cars Ltd., Shephed
Tel: Shephed 2169.
Albert Street Garage,
Melton Mowbray.
Tel: Melton Mowbray 2235/5164.

LINCOLNSHIRE
Caythorpe Motors Ltd.,
Caythorpe, Grantham
Tel: Loughborough 72386.
East Lincs Motor Co. Ltd., Louth
Tel: Louth 2976.
Hubbard Bros
(North Somercotes) Ltd.
Tel: North Somercotes 301.
Marriott's Motors, Boston
Tel: Boston 63841.
Mill View Motors,
Easton-on-the-Hill
Tel: Stamford 3943.
Newport Garage (Lincoln) Ltd.,
Newport Arch.
Tel: Lincoln 27672.

MERESIDE
Wirral Car & Engineering
Services Ltd.,
Little Sutton, Wirral.
Tel: 051-339 2468.
Beach Garage Ltd.
Litherland, Liverpool
Tel: 051-928 2515.
Clint Motor Co. Ltd., Liverpool
Tel: 051-263 7374.
Corinthian Motors,
Rock Ferry, Birkenhead
Tel: 051-645 2488.
D. J. Motors, Rainhill
Tel: 051-426 4234.

NORFOLK
Cranes Garage (Norwich) Ltd.
Tel: Norwich 54744/57377.
Crane Garage (Norfolk) Ltd.,
Marsham.
Tel: Aylsham 3274.
Bridge Garage, Wymondham
Tel: Wymondham 602394.
Service Dealer:
Central Garage (King's Lynn) Ltd.
Tel: King's Lynn 64241.
Service Dealer:
Manor Garage, Downham Market
Tel: Southrey 291.
Midknight Service Station,
King's Lynn.
Tel: King's Lynn 840265.
North Denes Garage,
Gt. Yarmouth
Tel: Gt. Yarmouth 2259.

NORTHAMPTONSHIRE
S. K. Distributors, Brackley.
Tel: Brackley 702937.

Campbell Motors, Northampton.
Tel: Northampton 31611.
Frank Cook Motors,
Wellingborough.
Tel: Wellingborough 223924.
Grays of Thrapston Ltd.,
Nr. Kettering.
Tel: Thrapston 2319.

NORTHUMBERLAND
Beside Motors Ltd., Beside.
Tel: Blyth 823030/824111.

NORTH YORKSHIRE
Beverly Motor Co. Ltd.,
Killinghall.
Tel: Hattowgate 502352.
Cross Roads Garage,
Chapel Haddesley.
Tel: Burn 638/671.
Thirsk Motors, Thirsk.
Tel: Thirsk 22291.

NOTTINGHAMSHIRE
Renshaw & Newson Ltd., Arnold.
Tel: Nottingham 202355.
H. Clifford & Sons Ltd., Chilwell.
Tel: Nottingham 256117.
Howbeck Garage, Clabrough
Tel: Retford 702993.
Rainworth Motors,
Rainworth, Mansfield
Tel: Blidworth 2057.

OXFORDSHIRE
Thomas & Lafford Ltd., Wheatley.
Tel: Wheatley 2227.

SALOP
Autosales International,
Market Drayton.
Tel: 0803 2027/2477.
Gravel Hill Service Station, Ludlow
Tel: 0584 2584.
Highley Garage (1965) Ltd.,
Highley, Nr. Bridgnorth.
Tel: 0746 861615.
Ketty Motors, Oakengates
Tel: 954 618071.

SOMERSET
A. W. Hinder & Sons, Yeovil
Tel: Yeovil 6512.
E. Wareham & Sons Ltd.,
Gurney, Nr. Bath.
Tel: Oakhill 0749.

SOUTH YORKSHIRE
H. D. Hand, Malby.
Tel: Rotherham 812368.
David Hinchcliffe (Sheffield) Ltd.
Tel: Sheffield 57394.
Ken Wells Motors, Doncaster
Tel: Doncaster 7406.

STAFFORDSHIRE
Blackford's Garage Ltd.,
Blackford.
Tel: Cusack 3324.
Hexagon of Hanley,
Stoke-on-Trent.
Tel: 0782 261784.
Hiskins of Lichfield
Tel: Lichfield 22379.
Johnson & Richards Ltd.,
Basford, Stoke-on-Trent.
Tel: 0782 615106.
Mile Oak Motors, Tamworth
Tel: 0827 52224.

SUFFOLK
Eye Service Station, Eye
Tel: Eye 460.
W. D. Gardiner Motors Ltd.,
Tel: Sudbury 75703.
Lowestoft Motor (Car Sales) Ltd.,
Lowestoft.
Tel: Lowestoft 62802.
M. R. W. Garages,
Hundon, Nr. Haverhill
Tel: Hundon 240.
Pakenham Garage,
Pakenham, Nr. Bury St. Edmunds.
Tel: 0359 30342.

SURREY
Dawson Motors Ltd., Cheam.
Tel: 01-643 1211/2.
Dawson Motors Ltd., Redhill.
Tel: 0191 64733/4.
Judmans Car Service,
Selsdon, South Croydon
Tel: 01-657 6671/3168.
Kenneth Harmer Ltd., Dorking
Tel: 0306 3804.
A. E. Witham & Sons Ltd.,
Hersham, Walton-on-Thames
Tel: 988 26615/24846.

SUSSEX
Colin Cars Ltd., Ninfeld, Battle.
Tel: Ninfeld 892288.
Colin Cars Ltd., Eastbourne.
Tel: Eastbourne 761150.
Scott & Noble,
Barnham, Yapton, Bognor Regis.
Tel: 0243 552770.
Wivelsfield Green Garages Ltd.,
Haywards Heath.
Tel: 044-484 305.

TYNE AND WEAR
Central Car Sales,
Newcastle upon Tyne.
Tel: 0632 21693/22617.
Millfield Motors, Sunderland.
Tel: 0783 58352.
Wideopen Car Sales,
Wideopen, Newcastle upon Tyne.
Tel: Wideopen 225.

WARWICK
OCR Motors Ltd., Nuneaton.
Tel: 0682 385296/325577.

WEST MIDLANDS
Autosales (Repairs & Spares)
Ltd., Bilston.
Tel: 0902 40 2222.
Balsall Heath Motors, Birmingham.
Tel: 021-440 1844/1847.
Derek Miles Ltd., Leamington Spa.
Tel: 0925 26011/24151.
Motor Sales (Birmingham) Ltd.,
Erdington, Birmingham.
Tel: 021-327 0276.
Rayfield Autos Ltd., Coventry.
Tel: Coventry 20475/20492.
Stafford Street Garage, Dudley.
Tel: 0384 21461.
Stonhouse Service Station,
Harborne, Birmingham.
Tel: 021-427 4050.

WEST YORKSHIRE
J. & S. Motor Services (Ossett)
Ltd., Ossett.
Tel: Wakefield 273068.
Clifford Holt Ltd., Sowerby Bridge.
Tel: Halifax 31764.
Ernest Hanson Ltd., Cross Hills.
Tel: Keighley 33325.
Hemsworth Trade Autos,
Hemsworth.
Tel: Hemsworth 611 644.

Service Dealer:
Hepworth Motor Co. Ltd.,
Hepworth.
Tel: Holmfirth 2854.
Service Dealer:
Judsons Garage, Batley.
Tel: Batley 473026.
D. M. Keith Ltd., Leeds.
Tel: Leeds 459890.
Paul Wooding Ltd., Shipley.
Tel: Shipley 583055.
Robertson Motor &
Engineering Co., Liversedge
Tel: Hackmonswike 402184.
Southfield Lane Garage, Bradford.
Tel: Bradford 72658.
Town End Motors, Lockwood.
Tel: Huddersfield 29670.
York Road Service Station,
Castleford.
Tel: Castleford 554198.
Tel: Gorsemonn 2022.

WILTSHIRE
Gaes Motors,
Avonvale Service Station,
Chippenham.
Tel: Chippenham 56106.
Britannia Motors, Swindon.
Tel: Swindon 35303.
Turner's Garage,
Erestone, Nr. Devizes.
Tel: Bratton 268.

SCOTLAND
A. Seath & Son, Leslie.
Tel: Glenrothes 741245.
Autocross Distributors Ltd.,
Finnieston, Glasgow.
Tel: 041-226 4481.
Carnynte Autos (Distributors) Ltd.,
Glasgow.
Tel: 041-778 8565.
Service Dealer:
Carnynte Motors Ltd., Glasgow.
Tel: 041-778 1064.
Dixon Street Motors
(Hamilton) Ltd.
Tel: Hamilton 283690.
Eastwood Garage,
Shawlands, Glasgow
Tel: 041-632 6272.

Elderslie Car Sales, Elderslie.
Tel: Johnstone 22705.
Forthview Service Station,
Wellwood.
Tel: Dunfermline 24078.
Four Mile Service Station,
Aberdeen.
Tel: 0224-740 240.
George Strathdee Jr., Aberdeen.
Tel: 0224 30181.
Gilston Motors, Lossiemouth.
Tel: 034-381 2898.
Lade Garage, Bonnybridge.
Tel: Bonnybridge 3534.
Laggen Engineering Co. Ltd.,
Port Ellen.
Tel: Port Ellen 2344.
McKnight Motors (Ayr) Ltd.
Tel: Ayr 67458/7.
Midas Motor Co. Ltd., Edinburgh.
Tel: 031-229 9632.
Moore's Garage (Dunoon).
Tel: Dunoon 3308.
Morrison Motors Ltd., Carnwath.
Tel: Carnwath 225.
Parker Bros. (Kilmarnock) Ltd.
Tel: Kilmarnock 21902.
G. H. Pringle Motor Co.,
Easterhouses, Dalkeith.
Tel: 031-663 3454.
Royal Service Station,
Milton, Lesmahagow.
Tel: Lesmahagow 3409/3864.
Springholm Garage, Springholm.
Tel: Kirkpatrick Durham 283.
Taylors of Anniesland, Glasgow.
Tel: 041-959 1267.
Service Dealer:
The Garage, Denholm, Hawick.
Tel: Denholm 221.
J. Troup & Sons, Forfar.
Tel: Forfar 3755.
Waverley Motors Ltd.,
High Dalrymple.
Tel: Stranraer 4534.

WALES
John Bevan Car Sales Ltd.,
Llanarnell, Swansea.
Tel: Swansea 72524/76215.
Abermorddu Service Station,
Caerwili.
Tel: Wrexham 780447.
Bailey Bros.
Pantygelli, Abergavenny.
Tel: Abergavenny 3058.
Cefn Glas Service Station,
Bridgend.
Tel: Bridgend 4278.
Dennis Capel (Car Sales),
Caerphilly.
Tel: Caerphilly 883242/883381.
G. & M. Motor Sales Ltd.,
Newbridge.
Tel: Newbridge 243348.
Glenbrook Motors Ltd.,
Cwmfach, Aberdare.
Tel: Aberdare 872550.
Kylescourt Ltd., Newport, Gwent.
Tel: Newport 274385/279755.
Llanmawr Street Garage,
Cardiff.
Tel: Cardiff 6077.
Neyland Car Sales, Neyland.
Tel: Neyland 600482.
Pontlliw Service Station,
Pontlliw, Swansea.
Tel: Gorsemonn 2022.

NORTHERN IRELAND
Neville Johnston (Garages) Ltd.,
Belfast.
Tel: Belfast 28225/6.
Neville Johnston (Garages) Ltd.,
Hillsborough.
Tel: Hillsborough 682225.
Andrews & Co. Ltd., Belfast.
Tel: Belfast 27956.
F. J. Conroy, Beragh.
Tel: Beragh 274.
Crumlin Motor Mart, Crumlin.
Tel: Crumlin 52085.
H. O'Kane Motors, Armoyle.
Tel: Armoyle 357.
P. J. Taggart, Omagh.
Tel: Tamlaght, Omagh.
Tel: Tamlaght, Omagh.
Tel: Lisburn 668.
Channel Islands
Pauls Motors Ltd.,
Vauvert, St. Peter Port, Guernsey.
Tel: Guernsey 22191.
Three Oaks Garage,
St. Lawrence, Jersey.
Tel: Jersey 63117.

SKODA SUPER ESTE

Bad vibes



FATIGUE, according to a Transport and Road Research Laboratory report, is a contributory factor in a quarter of all accidents. A survey of motorway collisions, carried out by Cumbria police, makes much the same conclusion.

Most people's understanding of drowsiness is that it is caused by lack of sleep, or driving too long without a break. In fact, noise and vibration are as likely to trigger

mental and physical exhaustion.

The first sign is irritation—a period when a driver becomes more niggled than usual by delays and the bad driving of others. And it's as well to recognise this state and take remedial action by stopping the car and going for a short walk before resuming one's journey. For, if fatigue is allowed to get a grip, alertness and concentration plummet and, at a stroke, a driver becomes a menace to himself, his passengers and others.

The trouble with *noise* is that it is a constant irritant. You can get so used to it that you are no longer conscious of its presence. But it definitely is there—a continuous attack on the senses.

The problem is accentuated by *vibration* resonance which, once again, can be so slight that we quickly grow oblivious to it. But

all the while, this, too, takes a toll.

When it comes to damping these nuisances, the engineer's job is made all the harder by the fact that the opposite extreme—an absence of noise, vibration and movement—also induces sleep!

Noise and vibration stem from the unevenness of the road and are transmitted through the tyres, suspension, steering and driver's seat. Other principal influences are the engine, heater fan, transmission and final drive.

All contribute to rattles and boom frequencies—prevalent in modern, boxy cars, with panels resonating like loudspeakers.

It will be some years before engines are enclosed in a sound-proof envelope, so, with current technology and price competition, deadening noise is largely a case of installing sound-damping pads

in the appropriate places. Carpeting, underfelting, quilted roof lining and fabric upholstery also help.

The real needs, however, are closer manufacturing tolerances, improved combustion control and better balancing of the reciprocating and rotating parts of the engine and transmission. Relatively soft mounting of power units, drive-lines and suspensions could prove advantageous, too. And more attention should be paid to sealing rubbers, and improved panel ribbing, shaping and 'hushing'.

The remaining culprits—exhaust, fan and tyre noise—should, in the meantime, be taxing the ingenuity of accessory manufacturers' design teams.

MARCUS JACOBSON
Chief Engineer of the AA

DRIVE

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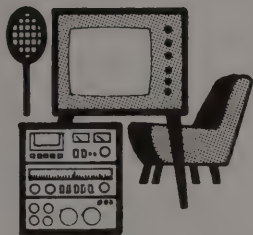
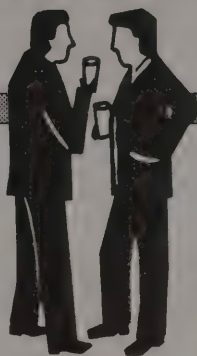
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“...flooded out just before the burglary...then the car packed up”



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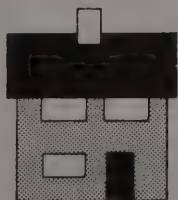
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To list its unique features would be to demean its overall air of something rare and rather special. But we would just like to draw your attention to the wheels, with that special breed of styling normally reserved for sports cars. To the fascia and door cappings, finished with real burr walnut veneer. To the deep cut pile carpets which elegantly complement

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from
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Triumph showroom, lost in admiration.

Or you may become one of the 19,000,000 British motorists who'll be staying on the outside looking in.



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*Price (includes front seat belts, car tax and VAT. Delivery and number plates extra) correct at time of going to press.

The Triumph Dolomite 1500 Special Edition

DRIVE

AA

September - October 1979 50p

the motoring magazine
that's so different

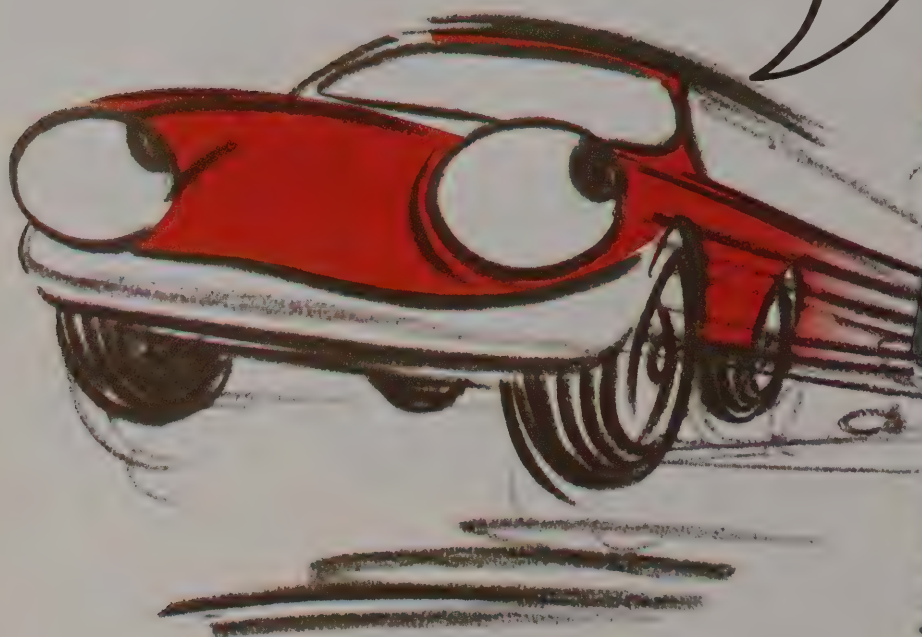


**Cheaper
to go
by bike?**

**SAVE
IT**

super-issue

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BACKED BY FORD

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YOU DON'T have to be Methuselah to remember 4-star petrol at 36p a gallon, and a Ford Cortina GT for £1193 . . . or domestic-heating oil at 10p a gallon, and a semi-detached in the Home Counties for £10,000. You need, in fact, only remember 1972.

But what a difference a handful of years can make! Nineteen seventy-two might as well be light years distant, as the stricken seventies draw to a close with the same urgent energy-message on the

lips of politicians and conservationists alike: Save It.

It's on our cover, too, and scattered throughout this energy-conscious issue as, ahead of October's International Energy Conservation Month, we bring you food for thought, and much honest-to-goodness, straightforward advice, about the UK's urgent need to Save It. Read us, then act . . . and help others as well as yourself.

Of course, most of our editorial is aimed fair-square at the man and

DRIVE REGULARS

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ABC Member of the Audit Bureau of Circulations

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the woman at the wheel: read 'Cost-cutter's Curriculum' (page 39) and our mpg doings in wildest, rural Watchet (page 31), and you'll be left in no doubt about that. But it's timely also, as Energy Conservation Month looms, to put a shot across government's bows, making the point that *good roads*, and more of them, are of central importance to energy conservation.

Swift, efficient travel pays off in petrol saved. Traffic moving freely at steady speeds on modern roads

consumes less fuel than traffic congested on choked, inadequate roads.

But it's a truth that seems lost on many politicians . . . together with that parallel truth, that it's an appalling waste, in both amenity and energy terms, to allow thousands of miles of our existing roads network to deteriorate for the lack of funds for local-authority roads maintenance.

— the Editor

Salvation army

A majority of owner-drivers are responding to the Save It campaign—mainly by going easy on the accelerator, but also by using the car less.

This welcome indication comes from a nationwide DRIVE survey aimed at determining how the private sector is reacting to rising fuel costs and the shortfall in supplies. The study also shows that most motorists mean to carry on motoring . . . somehow.

Petrol (on today's monetary values) will need to be £2 a gallon or more to make most think twice about throwing in the towel. And if that day ever should dawn? Well, many say that they will first make economies on food, clothing, holidays, leisure, tobacco and alcohol before quitting. For good measure, nearly half feel that they will probably end up buying a smaller car.

But not all motorists are prepared to make sacrifices—of any kind. A third of those questioned believe that recent petrol shortages have been artificial and deliberately inflationary, and, until it's proved otherwise to them, they are unlikely to make any real effort to use less fuel for the common good.

These owners aren't at all convinced that reported cutbacks in

Middle East crude production were the cause of the restricted UK availability of petrol in the evenings and at weekends in the early summer. Half say that it was all a 'ploy' by oil companies to push up prices; others think that it was a case of garage-hoarding, or a political measure to force people to use less.

The worrying backlash of this attitude is that nearly a fifth declare that they will not heed the Department of Energy's call for a 5% overall reduction. (One motorist says that he will not react until he sees government ministers travelling in Minis; another, until companies do their bit by cutting substantially the number of cars offered to staff as a perk, with tax, insurance and fuel subsidies thrown in.)

More than 50% of the drivers in

our survey state that they will avoid public transport at all costs, labelling it 'too expensive', 'unreliable', 'inconvenient' and 'time-wasting'. There is also reluctance to join car-sharing syndicates to either get to and from work or go shopping: only one in three thinks that it is practical. And advice to ensure that cars are regularly tuned to improve mpg seems to have fallen on deaf ears: seven owners in 10 are not having it done.

See Offer, page 23

Miner savings

Just six years from now, we could be filling up with petrol or derv extracted not from the oilfields of Arabia or the North Sea but from

Britain's coalfields. By the mid-1980s, if all goes to plan, the UK could be producing 4% of the nation's transport fuels this way. Indeed, according to the Coal Research Establishment, it's possible that *all* our transport-fuel needs, including air transport, will be processed from coal 'some time in the next century.'

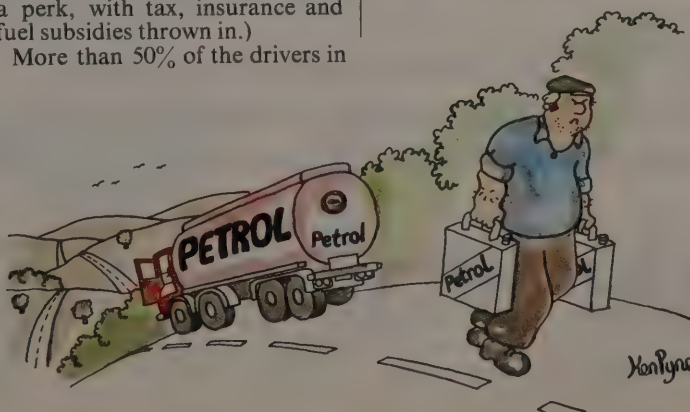
The idea is not new, of course: the Germans made liquid fuel from coal to fuel the war effort in 1939–1945, and S Africa has been making use of much the same technology for years. But, whereas the Germans were able to produce only 33gal from a ton of coal, the CRE is predicting that Britain will raise this figure to 150.

This is because new technology, in which Britain leads the world, by-passes the present wasteful, inefficient method of first converting coal into gas. Instead, the coal will be treated with a hot, coal-derived solvent, producing a thick solution that, after the addition of hydrogen, will be separated into a synthetic crude oil.

It is envisaged that, at first, processing costs will be twice as high as conventional oil production. But, by the time coal-fuel goes on stream, the pump price could be the same as conventional petrol or derv, if not cheaper . . .

To meet all the nation's trans-

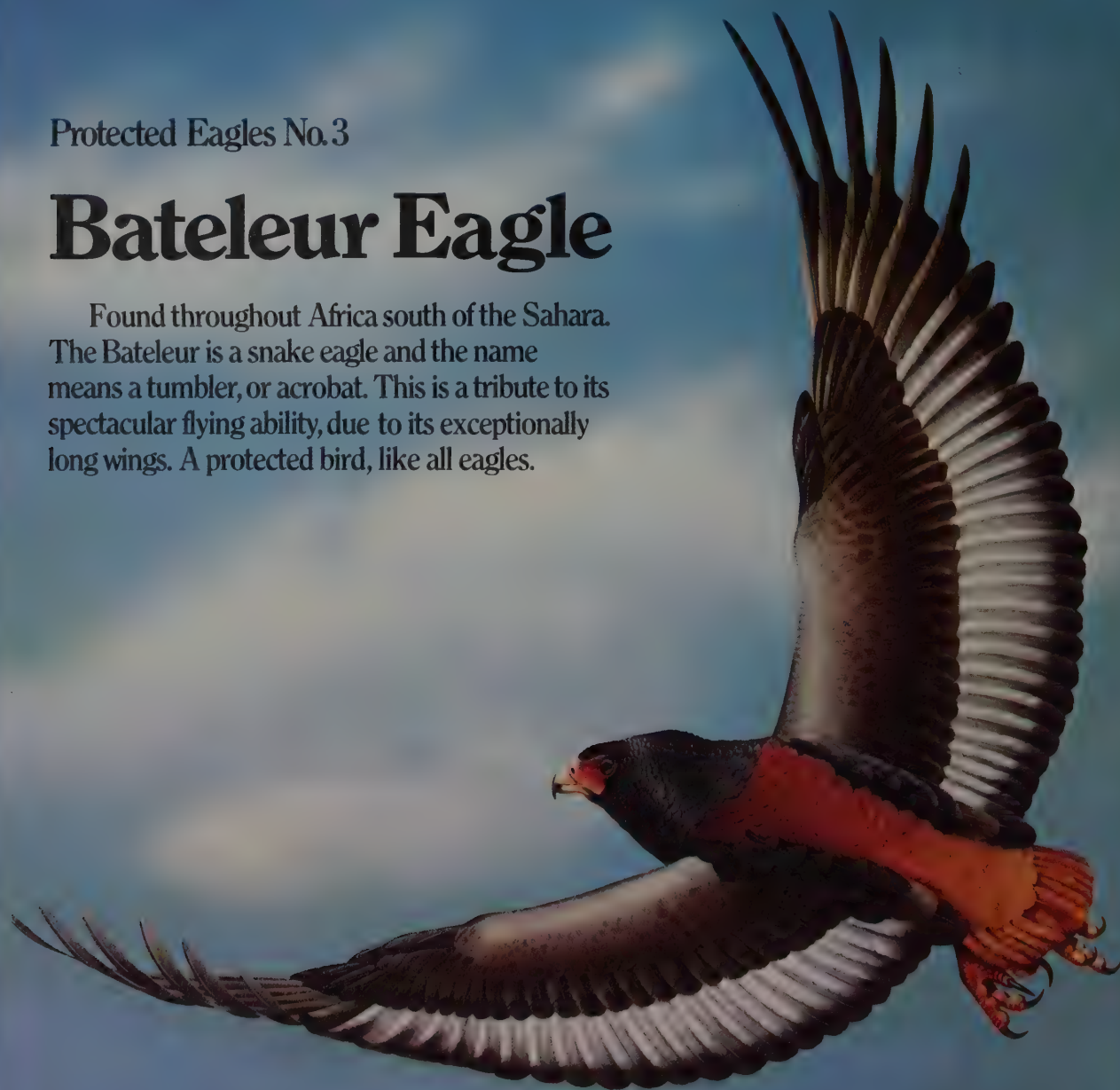
continued on page 7



Protected Eagles No.3

Bateleur Eagle

Found throughout Africa south of the Sahara. The Bateleur is a snake eagle and the name means a tumbler, or acrobat. This is a tribute to its spectacular flying ability, due to its exceptionally long wings. A protected bird, like all eagles.

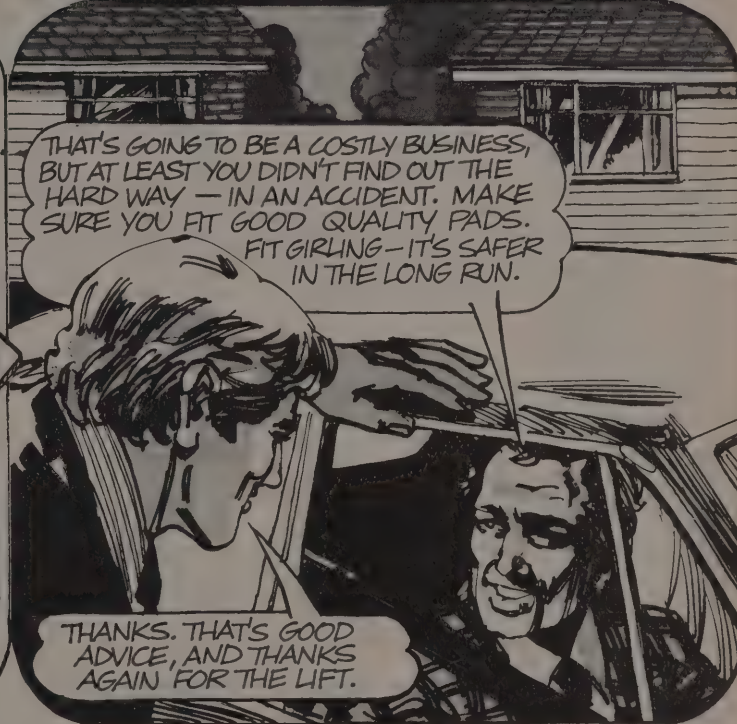
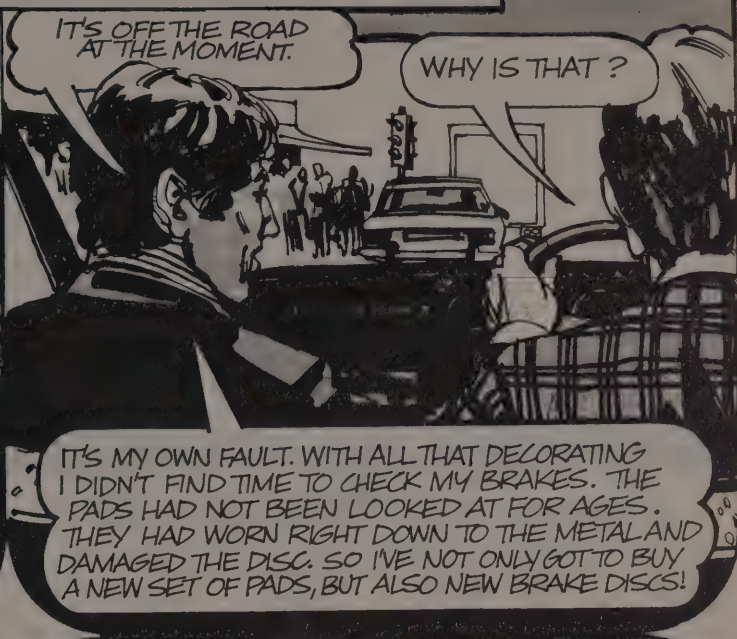


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SAVE IT

Mpg: great expectations

EVERY so often, DRIVE encounters a new or revised version of a car that offers something special in fuel economy. In the present oil climate, a lot of development work is now going into improving engine efficiency, and we think it's a shame that there isn't a greater general awareness among buyers of which cars use least fuel.

Sadly, the government-sponsored mpg tests are not realistic enough to encourage this—the

very purpose for which they were established: the mpg figures gained from running a car on a 'rolling road' machine, or from driving at a constant speed of 56mph, hardly reflect the sort of fuel consumption that ordinary drivers can expect in ordinary driving conditions. True, the Department of Energy insists that its figures are only an indication of a car's comparative thirst; but using mpg figures such as these is like trying to dig up archeological relics with a pneumatic drill—

mere approximation is simply not good enough.

The figures that DRIVE prints are gained by conducting test runs on real roads—even artificial 'delays' are built-in so that results are repeatable to make car-to-car comparisons absolutely fair. This means weekend, early-morning and dead-of-night car-testing to avoid having to make unscheduled stops. Perfection has its price!

Let us share some of the 'treasures' that we have encountered in the last year—and some of the inevitable disappointments, too.

The various market sectors for saloons and hatchbacks can be defined as follows, with examples and our 'target' overall mpg indicated—the sort of consumption

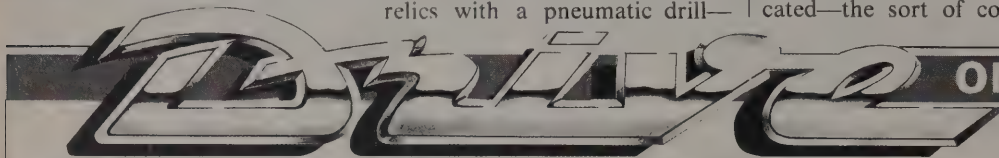
that we have learned to be typical for each size of car.

Small (under 1000cc) eg Reliant Kitten/Fiat 126—45mpg-plus
Supermini (4cyl/1000cc-plus) eg Ford Fiesta/Renault 5TL—40mpg
Intermediate (more than 1200cc) eg Austin Allegro/Vauxhall Chevette—33–35mpg

Medium (1500cc-plus) eg Ford Cortina/Austin Maxi—30–32mpg
Executive (4cyl/2000cc) eg Vauxhall Carlton/Austin Morris Princess 2000—25–27mpg

Large (6cyl/2500cc-plus) eg Ford Granada/Rover 2600—20–22mpg

Of course, cars, like people, don't all fit neatly into categories, but it's surprising how many can be slotted into these six groups without straining definitions. And, when we start listing the



ON-THE-ROAD NEW-CAR

What's it called? How much does it cost? DRIVE's superguide to the latest prices of new cars currently available in Britain tells you all you need to know, immediately, whether you're buying or just browsing. And our prices aren't just what the manufacturer says: we tell you the size of the cheque you can expect to write to put your new Mini or Rolls on the road, seatbelts, numberplates, road-fund licence and delivery paid. Want to know more? Well, if the car of your choice has a DRIVE/AA road-test report number beside it, you can have a copy of the best car criticism in the business. AA members can apply to their regional AA office—address in *Handbook*. Otherwise, write to DRIVE New-car Price-guide, Fanum House, Basingstoke, Hants, RG21 2EA. But we must now ask readers who request more than one to pay 10p for each report.

(a) denotes road test on automatic model only; delivery charges where applicable estimated on an average 200 miles.

	Manual	Auto	DRIVE/AA Road Test
--	--------	------	--------------------

AC (20 dealers)			
3000ME	13770	—	

ALFA ROMEO (150 dealers)			
Alfasud Super 1.3 (1350cc)	3670	—	
Super 1.5	3852	—	
Ti 1.5	4075	—	
Sprint 1.5	5055	—	D6/79
Giulietta 1.6	4895	—	
GTS	5906	—	
2000L	5799	—	
GTV2000	6576	—	
GTV Strada	8035	—	

ASTON MARTIN (13 dealers)			
V8	28858	28858	
V8 Vantage	30987	—	
V8 Volante	36168	36168	
Lagonda	—	40040	

AUDI (350 dealers)			
80LS	5072	5384	
GLS	5658	5970	
GLE	6292	—	
L 5S	6286	6811	R1176
GL 5S	6813	7338	R1176
Avant GL 5S	7090	7615	R1176
GL 5E	7511	8036	D8/78(a)
CD 5E	—	9262	D8/78(a)
Avant CD 5E	—	9587	

AUSTIN MORRIS (1850 dealers)			
Mini 850	2532	—	RTR340
1000	2663	3073	D3/78
Clubman (1098cc)	2951	—	
Clubman (998cc)	—	3361	D3/78
estate (1098cc)	3205	—	
estate (998cc)	—	3615	
Allegro 1100DL	3055	—	
4dr	3173	—	
1300S 2dr	3414	3824	
4dr	3530	3940	RTR377
1300S estate	3731	4141	
1500S 4dr	3641	4051	
1500S estate	3871	4281	
1500SP 4dr	4023	4433	D5/79
1750HL 4dr	4261	—	
Vanden Plas 1500 4dr	4571	4959	

Marina 1300	3303	—	
4dr	3431	—	
1300L 2dr	3565	—	
4dr	3659	4030	RTR392
1300HL 4dr	4038	4409	
1300 estate	3909	—	
1700 4dr	3733	—	
1700L 4dr	3971	4342	
1700HL 4dr	4378	4749	D4/79
1700 estate	4130	—	
1700L estate	4411	4782	
Maxi 1500	4059	—	RTR263
1750	4237	4674	
1750HL	4469	4906	
1750HLS	4591	—	
Princess 1700L	4352	4815	
1700HL	4672	5135	
1700HLS	5163	5626	
2000HL	4926	5389	
2000HLS	5441	5904	
2200HL	5316	5779	D11/78
2200HLS	5908	6371	

BENTLEY (78 dealers)			
T2 Series	—	36824	
Corniche	—	53494	
Convertible	—	56808	

BMW (145 dealers)			
316	5215	—	R1149
320	6546	6983	R1149
323i	7610	—	
518	6865	—	
520	7983	8420	D2/78
525	9101	9538	
528i	10326	10763	
633CSi	—	17673	
635CSi	18951	—	
728	11390	11921	
730	13414	13945	
733i	14691	15222	

BRISTOL (0 dealer)			
412 S2 convertible-saloon	—	31256	
603 S2	—	34576	

BUICK (5 dealers)			
Century	—	9578	

CADILLAC (5 dealers)			
Seville Elegante	—	21769	
Elegante (lhd)	—	19396	
Seville	—	18362	
Seville (lhd)	—	15989	
Fleetwood-Brougham	—	—	
d'Elegance	—	15869	

CATERHAM CARS (0 dealers)			
Super Seven TC	4872	—	
1600GT	4404	—	

CHEVROLET (5 dealers)			
Caprice Classic	—	12904	
Classic (lhd)	—	10680	
Classic estate	—	13028	
Classic estate (lhd)	—	10805	
Monte Carlo coupé	—	9878	
Corvette (lhd)	—	12228	

CITROEN (260 dealers)			
2CV6	2205	—	RTR118
Dyane Weekend	2423	—	D1/79
GS special	3412	—	
estate	3702	—	
Club	3766	4009	RTR384
Club estate	4021	4264	D5/79
Pallas	4182	4525	
CX2000 super Pallas 2400	5929	—	RTR416
Injection	—	7932	
CX2400 Super	6613	—	RTR416
Pallas	7264	7468	
GTi	7910	—	
Prestige Injection	10549	10549	
Safari	6790	7121	RTR416
S Familiale	6912	7243	
CX2500D	6866	—	
D Safari	7172	—	
D Familiale	7292	—	

COLT (318 dealers)			
1400GL	3709	4054	RTR371
4-dr	3869	—	
GLX 3-dr hatchback	3919	—	
GLX 5-dr hatchback	4189	—	
1400 estate	4029	—	
Celeste 1600ST	4349	—	
GS	4559	—	D5/78
2000GT	4879	—	
Sigma 1600GL	4559	4904	
2000GLX	5149	5494	RTR432
estate	5729	—	
Sapporo 2000	6339	6684	

DAIHATSU (76 dealers)			
F20 soft top	4941	—	
hard top	5101	—	
F50 soft top (diesel)	5435	—	
hard top (diesel)	5595	—	

DATSUN (400 dealers)			
New Cherry 3-dr hatchback L	2897	—	
GL 3-dr	3129	—	
4-dr saloon	3192	—	
5-dr estate	3408	—	
3-dr coupé	3602	—	
Sunny 1200GLS			
2-dr	3388	—	
4-dr	3495	—	
1400GLS			
2-dr	—	3860	
4-dr	—	3957	
1200 estate	3729	—	
1400 coupé	—	—	
4-speed	3829	—	
1400 fastback estate	4031	—	
Violet 140J Mk3	3823	R1132M	
160J Mk3	3906	4204	
SSS coupé	4391	—	
Bluebird 160B MkII	4122	—	
180B	4320	4528	
180B estate MkII	4584	RTR316	
180B SSS MkII	4730	—	
Laurel 2litre MkII (PAS)	5628	5968	
2.4litre (PAS)	6328	6668	
Skyline 240K coupé	6892	7232	
280ZX			
2-seater	8761	9104	D7/78
280ZX 2 + 2	9715	10055	
280C saloon	7226	7566	
280C estate	7054	7394	

DE TOMASO (3 dealers)			
Pantera GTS	19278	—	
Longchamp	—	21502	
Deauville	—	24635	

FERRARI (17 dealers)			
Dino 308GT4	17143	—	
308GTB	18559	—	
308GTS	19453	—	
400GT	30295	30295	
512BB	32258	—	

FIAT (400 dealers)			
126	2159	—	
de Ville	2350	—	D1/79
127 900L 2dr	2838	—	R1137
1050L 3dr	2972	—	
1050C 3dr	3095	—	
1050CL 3dr	3216	—	RTR429
Sport	3578	—	
128 1300CL	3504	—	
CL estate	3633	—	
Berlinetta Special Series	—	—	
X/19 1500	5474	—	
Mirafiori 1300L			
2dr	3555	—	
4dr	3705	—	
1600CL 4dr	4367	4670	
estate	4751	5054	RTR412
Supermirafiori 1600TC	5025	5328	D10/78

actual overall consumption of cars tested, some interesting comparisons emerge.

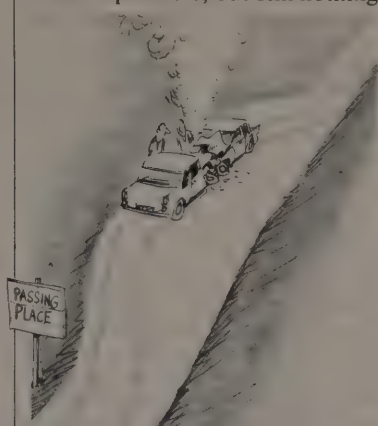
Small

For all their idiosyncracies, both the FIAT 126 and CITROEN DYANE still offer real petrol parsimony at 47mpg, while the MINI 1000 is good for only 42½mpg.

Supermini

The FORD FIESTA is a real economy car; unlike so-called Economy Populars and Cortinas that never really delivered the goods, the 41mpg 957L is the first Ford we have tested that gives better than 40mpg—(even the 1100 GHIA does 38mpg). The new RENAULT 5 AUTOMATIC's economy takes a serious tumble, however—

down to 31mpg, which is 8½mpg heavier than the respectable 5TL. Also respectable, but still nothing



special, is the new TOYOTA STAR-LET's 38½mpg.

Intermediate

Despite their low prices, the Eastern European imports need more petrol; the LADA 1200 manages only 28½mpg (worse than the new 1600, itself an unremarkable 29½mpg), although the SKODA ESTELLE is a lot better at 34mpg, and seems hardly to vary, irrespective of engine size.

The 1300cc PEUGEOT 305 (34mpg) and TALBOT HORIZON (33½mpg) are just average, too; but, while the 1500 Peugeot is a whisker better than its 1300 equivalent, the 1300 Horizon is worse by 2mpg than its smaller-engined stablemate's 35½mpg. The other member of that newly formed trium-

virate—CITROEN—still suffers from an over-developed thirst on its otherwise impressive GS1220: at 31½mpg, it is a classic case of a good car needing a bigger engine. Conversely, the British TALBOT SUNBEAM manages 39mpg in apparently under-engined 1000cc form—but, sadly, it is lacking in performance.

Our accolade in this sector must go to the VW GOLF 1500 DIESEL; its 51mpg is the best overall consumption that we have ever achieved—on anything!

Medium

It's VW who wins the prizes in this group, too—the latest higher-geared PASSAT 1600 GLS attains 35½mpg, and that on 2-star petrol. It is coming in for stiff com-

PRICE-GUIDE

Mirafiori Sport	5599	—
132 2litre	5893	6234
Strada 65L 3dr	3395	—
65L 5dr	3509	—
65CL 3dr	3668	—
65CL 5dr	3780	—
75CL 3dr	4028	4337
75CL 5dr	4140	4449

FORD (1240 dealers)		
Fiesta 950	2782	— RTR417
950L	3092	—
1100	2926	—
1100L	3234	—
1100S	3596	—
1100 Ghia	4021	— RI170
1300S	3784	—
1300 Ghia	4167	—

Escort 1100	—	—
Popular	2783	— RI136
1100 Popular plus	2904	—
1100 Popular plus 4dr	3024	—
1100L	3162	—
1100L 4dr	3283	—
1100 estate	3119	—
1300 Popular	2874	—

1300 Popular plus	2960	— D4/78
1300 Popular plus 4dr	3191	—
1300L	3253	3573
1300L 4dr	3373	3693
1300GL	3573	3893
1300GL 4dr	3693	4013
1300 Sport	3771	—
1300 Ghia	4191	4515
1300 Ghia 4dr	4312	—
1300 estate	3276	—
1300L estate	3618	—
1300GL estate	4012	—

1600 Sport	3880	—
1600 Ghia	4420	4744 D4/79
Cortina 1300	3357	—
1300 4dr	3486	—
1300L	3583	— RTR372
1300L 4dr	3712	—
1600 4dr	3686	—

1600L	3912	4236 RTR404
1600GL	4279	4603
1600 Ghia	5069	5393
1600 estate	4094	—
1600L estate	4358	4682
1600GL estate	4726	5050

1600Ghia estate	5515	5839
2000GL	4520	4844
2000S	4807	—
2000 Ghia	5213	5537
2000GL estate	4966	5290 RTR413

2000 Ghia estate	5659	5983
2300GL	5103	5427
2300S	5390	—
2300 Ghia	5795	6119
2300GL estate	5549	5873
2300 Ghia estate	6242	6566

Capri 1300L	3854	— RTR373
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1600L	4064	4388
1600GL	4324	4648 RTR342
1600S	4934	—
2000GL	4580	—
2000S	5143	— RI166
2000 Ghia	5979	6303
3000S	5534	—
3000 Ghia	—	6742 RI114
Granada 2000L	5409	5733 RI128

2000L estate	5978	—
2100 diesel	5820	—
2300L	5723	6047
2300GL	6961	—
2300L estate	6280	6604
2800GL	—	7438
2800i GLS	8138	—
2800 Ghia	—	9005
2800i Ghia	9431	9755
2800GL estate	—	7967 D8/78
2800i GLS estate	8519	8843

2800 Ghia estate	—	9418 D8/78
2800i Ghia estate	9764	10088

FORD USA (14 dealers)

Mercury		
Monarch Ghia (rhd)	—	9428
Monarch (lhd)	—	8364
Mustang Ghia		
Turbo (lhd)	7879	—

HONDA (246 dealers)

Civic 1200 3dr	3088	3318 RTR362
1200 5dr	3288	3518 RI155
Accord 3dr	4298	4568 RTR420
4dr	4488	4758 D4/79
Executive DL	—	5588
Prelude	5088	5358

JAGUAR ROVER TRIUMPH

(319 Jaguar-Daimler; 950 Rover-Triumph; 486 Land-Rover; 1850 MG dealers)

Jaguar XJ6 3.4	12651	12651 RTR380
XJ6 4.2	13923	13923
XJ12 5.3	—	16930 RTR305
XJS	—	18680 RTR394

Daimler		
Sovereign 4.2	14658	14658
Double-Six	—	17682
Vanden Plas 4.2	—	19381
Double-Six		
Vanden Plas	—	22814

Rover 2300	6526	6916 D8/78
2600	7378	7619
3500	8656	8896 RTR428
V8S	10819	11049

Range Rover		
3.5	11325	— D2/79

Land-Rover		
diesel	5784	—
lwb	5952	—
lwb diesel	6642	—
lwb 6-cylinder	6211	—
Triumph Spitfire	3916	—
hardtop	4025	—
Dolomite 1300	3821	—
1500	4078	4472
1500HL	4518	4912

1850HL	5096	5490
Sprint	6182	6321
TR7	5456	5689
MG Midget	3489	—
MGB Sports	4646	— RTR243
MGB GT	5283	—

JEEP (16 dealers)

CJ7 soft top	5653	—
hard top	6068	—
Renegade	—	—
soft top	7197	—
hard top	7570	—
CJ Golden Eagle	7197	—
hard top	7570	—

Cherokee 4dr (6-cyl)	9571	9678
S (6-cyl)	—	10551
S V8	—	11169 D2/79
Chief V8	—	11488
Golden Eagle	—	—
Chief	—	11828

LADA (195 dealers)

1200	2300	— RI175
estate	2620	—
1300ES	2691	— D4/78
1500 estate	2758	—
1500ES estate	3168	—
1600	2971	— RI173
1600ES	3373	— RI173
Niva	4287	—

LANCIA (135 dealers)

Beta 1300	4312	—
1600	5144	—
2000	5437	— RI171
2000ES	5817	—
Beta coupé	5111	—
1600	5826	—
2000	6302	—
BetaSpyder2000	6849	—
Beta HPE 1600	6574	—
2000	7106	—
Gamma Berlina	8010	—
Gran Turismo	10009	—

LOTUS (58 dealers)

Elite 501	14452	14998
502	15444	—
503	15983	—
504	—	16225

Eclat 520	12866	—
521	13864	14413
522	14882	—
523	15421	—
524	—	15651
Esprit	14086	—

MASERATI (9 dealers)

Merak SS	19054	—
Kyalami	25757	—
Khamsin	28248	—

MAZDA (260 dealers)

1000 hatchback	3030	—
1300 hatchback	3456	— D4/78
1300 hatchback	—	—
5dr	3616	— RTR424
1.4 Special hatchback	3829	—

1400 hatch 5dr	—	3956
1400 estate	3829	— D5/79
Montrose	—	—
1600GL	4254	—
GLS	4521	—
2000GLS	4840	5160
GLS coupé	5319	—
2000 estate	5486	5811

MERCEDES-BENZ (96 dealers)

200	7928	—
200D	8104	—
230	—	9070
230C	—	11057
240D	9086	9682
240D lwb	14199	14639
240TD estate	10586	10586
250	—	10490
250T	—	11864
250 lwb	—	14199
300D	—	11302
280E	—	12507
280SE	—	14614
280CE	—	13581
280TE estate	—	13993
350SE	—	16996
350SL	—	16825
450SE	—	18295
450SEL	—	19317
450SL	—	17976
450SLC	—	21143
450SEL 6.9	—	30632

MORGAN (18 dealers)

4/4 1600	5167	—
4-str	5684	—
Plus 8	7547	—

OPEL (237 dealers)

Kadett Economy	2915	—
DL	3165	3607
City DL 3dr	3238	3680
Special	3426	3868
Special 3dr	3537	3978
Special 4dr	3515	3957
Special estate	3740	4182 RTR338
coupé	3659	3996
Ascona	3814	—
4dr	3938	—
DL	4257	4541
1.6DL	4379	4796
2.0DL	4599	5016
2.0 Berlina	4978	5395

Manta 2.0	—	—
Berlinetta	—	—
hatchback	5744	6161
coupé	5615	6032 RTR407

Rekord	—	—
4dr saloon	5506	5950
Berlina	5809	6253 D12/78
Berlina HL	6676	7120
estate DL	6695	7139
DL diesel	6544	6988

estate DL diesel	7057	7501
Senator	—	11393
Monza coupé	11703	11703

PANTHER (35 De Ville, 3 Lima dealers)

J72 4.2	19301	19721
de Ville 5.3	—	—

port-fuel needs, Britain's coal yield will need to be increased from 110million tons to 180million tons a year; the capital will also have to be found to build 30liquefaction plants. The good news is that there's coal to keep us motor-ing on 'for centuries'.

Gulp a gallona?

So you think that you're being hard done by, having to pay £1.20-plus for a gallon of petrol. In fact, it's cheap when you consider that the price includes the cost of geological survey-work, oil exploration, crude production, vast pipeline networks, transportation halfway across the world, refining, delivery to your local, down-town filling station, and a 45% excise and VAT levy.

Now match that little lot against the cost of a pint. Can the upkeep of a cow in an English field, plus the £p involved in extracting the milk and then transporting it a few miles, pasteurising it, bottling it and delivering it (free of any Excise duty and VAT), really be the same as petroleum manufacture?

True, Britain's motorists consume four times as much petrol as the nation laps up milk. Yet the fact remains that the price of eight silvertop pintas, as we go to press, is... £1.20.

Another fine meths...

It can be made from oil, North Sea gas or any plant. Indeed, all it needs is a source of carbon... and a multi-million-pound chemical works.

The 'it' is methanol, and at present, 30,000 tons of it is mixed with petrol each year by sporting enthusiasts, like drag racers, who don't particularly mind paying £1.50 for a gallon that goes nowhere. But, according to ICI, sole producers of methanol in the UK, it couldn't hope to supply enough methanol even to dampen the filler-caps of Britain's 14 million cars... and, if ever it could, cars would need modifications costing at least £100 to overcome the corrosive properties of methanol. (Don't forget, it's used as a solvent, and can do nasty things to plastic and rubber.)

On a quick DRIVE calculation, Britain could save 5% of its petrol bill by producing an extra 600,000 tons of methanol a year. But it would take at least two years just to build the factory.

Pump gossip

'People should now understand that the era of cheap petrol is over, and saving is the order of the day.' At a time when Shell slammed its 4-star price up by 7p, and when some other garages were selling a gallon for £1.40, that statement by Motor Agents Association director general Alan

Dix could hardly be classified as a shock revelation.

Mr Dix, attempting to convince motorists that they were not alone in their suffering, went on to stress that many garages were having to pay £1.20 a gallon to get supplies from the extortionate Rotterdam 'spot market'. Garages, he said, needed to make an absolute minimum of 10% to cover rent, rates, wages and other costs and provide a reasonable profit. (Back in the mists of time, when petrol could still be bought for 99.9p, the net profit was around 1.6p.)

Cut-backs in deliveries—up to 20% in many cases—were largely to blame. Garages could not be faulted for putting up their prices to make up for loss of turnover, could they? Thus argued Mr Dix, adding that 3548 filling stations had gone out of business since 1975, and predicting that a further 1000 would follow by 1980.

The number of garages going to the wall is undeniable. The Institute of Petroleum listed nearly 1500 sites which ceased to sell petrol last year (the highest total since 1971), leaving 28,295 outlets throughout the country. The 527 self-service sites, while comprising only 18% of all out-



KonPyre

lets, now sell more than half of all petrol in the UK.

Alternative account

What can be done to curb the price-spiral of oil? Prior to the Tokyo Summit, but in the wake of exhortations from President Carter and Sheikh Yamani, Brussels voted to spend up to £63 million of European cash over the next five years on the development of alternative-energy sources.

The bulk of this—some £33 million—is to be devoted to the gasification and liquefaction of solid fuel, plus £15million each for geothermal and solar energy.

Computer-car

Still on the subject of fuel, Talbot has fitted a 'trip computer' to its Horizon GLS to provide drivers with precise information such as mpg and fuel efficiency. These

continued on page 13



MY KIND OF PLACE An inspector calls

WHEN PLANNING that special night out, the chances are that you get a friend to recommend a place... and finish up reserving a table at a romantic restaurant Up West, or miles out in the countryside. Somehow, the idea of popping down to the little French or Italian place in the local High Street at once kills off all sense of occasion.

But isn't it all in the mind? Surely, as long as the food, the wine and the service are memorable, the atmosphere intimate and relaxing, in the end the success of the evening is dependent on the effort that you put into it—the conversation, the togetherness. The restaurant hasn't yet been built that provides these.

In any case, there's now another important consideration: the high cost of petrol, and the need to Save It. And with this in mind, DRIVE invited three AA restaurant inspectors to sample the

gourmet scene in three suburban areas in different parts of the country, to find out if they could hold a dinner-time candle to the ritzier places farther afield. In each instance, the report came back: 'Good! As good as, if not better than, many places in the West End...'

Jean Pierre Mifsud, based at the AA's south-east region Teddington headquarters, tried Les Amoureux (X), a small bistro in Merton Hall Rd, Wimbledon, S London. Run by a husband-and-wife team, French-trained chef Nigel Thomson and former Bunny-girl Angela Scott-Forbes, the eating place is described by Mifsud as 'a serious restaurant with competent, enjoyable cooking'. The short French menu, he records, is 'interesting' and, changing daily, comprises 10 starters, an equal number of main courses, and at least half a dozen sweet selections.

The fare, he goes on, is 'simple and prepared with good quality ingredients', the service 'friendly and attentive', and the decor 'pretty and rather feminine'. Cost, from around £7.50 a head, including wine and VAT, represents good value.

Bill Phillips had just as encouraging things to say about Jonathan's (X), a tiny restaurant set back from the busy Wolverhampton Rd junction with Hagley Rd at Oldbury, Birmingham. Its speciality is authentic Victorian cooking, and the setting—with lots of period

bric-a-brac—gives the place authentic atmosphere. Vegetable offerings are a particular feature, says Phillips; at least five varieties appear with each meal. 'I especially liked carrots with fennel, swede with walnuts, mushrooms with apricot, and pan hagarty,' he reports.

To round off the meal with something completely different, Phillips suggests 'a cuppa'—though that could be easier said than done, as there are 15 different brews of tea to choose from. The all-in cost: about £11 a head, including wine.

North of the border, AA expert Andy Brownlee recently treated his brother and sister-in-law to dinner at La Bavarde (X), a little French restaurant in New Kirk Rd, Bearsden, six miles from the centre of Glasgow. 'We had an unforgettable night,' he reports. 'The English translation of the restaurant's name is "chatterbox", and certainly it lived up to that.'

'The place is really alive, the atmosphere bright and breezy. And the helpfulness of the owner, Armenio "Tony" Trevisan, is a delight. He visits every table, and describes the cooking of each dish and the sauces.'

Brownlee's verdict: 'The menu provides more than a medium range of offerings, and Beef Wellington (fillet steak in biscuit case) is recommended. The price: from £8.50 a head, including aperitif and wine.'



THIS is a true story about a Honda Accord, a very wet night, and what reliability really means when the going gets tough.

The Honda Accord is SLW 985R, and the very wet night was February 12th, 1978.

That's the night the Accord's owner parked near the banks of the Medway.

The night of thunderstorms. And flooding.

When he returned a day later, the Honda was up to its neck in water. Worse, it stayed that way for nearly 24 hours.



SLW 985R as it is today.

FOR FURTHER INFORMATION ON THE RANGE OF HONDA CARS PLEASE CONTACT YOUR LOCAL HONDA DEALER. ACCORD RANGE POWERED BY 1602 cc O/HEAD CAM ENGINES.

RECOMMENDED RETAIL

THE HONDA THAT W



First time.

a garage for a dry out and clean up.

Today, the car still shines.

The original electric systems still work perfectly.

The engine still runs sweetly, on 2-star petrol.

And it's still a one owner car.

In fact, the only reminder of the flood has been the bonnet release cable. It needed re-greasing.

The moral is, if you want a hard luck story, don't buy a Honda.

HONDA

ENGINEERING AT ITS BEAUTIFUL BEST

ENT FOR A PADDLE.





Tuppenny wonders

FOR THOSE in the hunt for gallon-stretching cars, look no further than the Datsun Cherry and the Fiat 128/124. For, according to the latest DRIVE Index of Motoring Costs (right), these top the economy league. In the 12 months ending April, they returned a fuel-cost-per-mile of just 2.38p and 2.41p respectively.

Others in this period to keep the cost of petrol to under 3p per mile were: BL Mini 1000 (2.64p) and Mini 850 (2.66p), Vauxhall Chevette and Fiat 500/127 (2.68p), Datsun Sunny (2.83p)—car test, page 28—Morris Marina 1300 (2.85p), Vauxhall Viva (2.88p), Austin Allegro (2.93p) and Ford Cortina 1300 (2.95p).

But the overall picture is far from bright. Exceptionally high outgoings on servicing and repairs in March and April increased total annual motoring costs to £636.12—the highest so far recorded. That's £26.55 more than last time, and the reason why our Index now stands at 208.

In fact, servicing and repair costs increased by £18.33. And, reflecting the start of higher prices at the pumps, petrol costs jumped by a penny over £5 to £288.12. Expenditure on accessories also increased (by a third), while insurance went up by £1.20 to £54.81. Only oil and 'other costs' have shown small decreases.

The rises mean that, for the 12 months ending April 1979, it has cost the average motorist more than 7p a mile to run his car, more than double the amount logged in October 1973, when the DRIVE Index began.

The leap in servicing and repair bills has particularly hit British cars, notably the Ford Escort 1100/Popular, Escort 1300, Chrysler Hunter and Austin Maxi. An average British car now costs 7.06p per mile to run, compared to 6.62p for an average foreign car. Japanese and German models, at 6.43p and 6.47p per mile respectively, are the most economical.

Cheapest of all to run are the Datsun Cherry and Volkswagen Golf/Polo, at 4.95p and 4.99p per mile respectively, followed by Vauxhall's Chevette (5.07p) and Cavalier (5.19p).



COST OF MOTORING: May 1978–April 1979

INDEX Oct 1973 = 100	102	204	206	97	244	146	183	207	208
MONTH-BY-MONTH ANALYSES (all cars) AND ENGINE RATING ANALYSES (post-1969 cars)	Average monthly mileage	Cost per mile (pence)	Petrol	Oil	Servicing repairs	Accessories	Insurance	Other costs	TOTAL
May 1978	762	7.82	24.86	0.63	21.56	1.18	4.33	7.05	59.62
June 1978	852	5.84	24.38	0.81	11.88	1.01	4.41	7.28	49.77
July 1978	813	6.55	24.92	0.89	14.19	0.31	4.41	8.50	53.22
August 1978	872	5.91	25.64	0.78	10.42	1.03	4.51	9.13	51.52
September 1978	798	6.56	23.27	0.84	15.08	0.65	4.45	8.02	52.31
October 1978	807	6.20	24.49	0.64	12.77	0.70	4.58	6.88	50.05
November 1978	784	6.88	24.72	0.54	15.01	0.38	4.60	8.68	53.94
December 1978	649	7.97	23.12	1.70	14.14	0.58	4.60	7.59	51.73
January 1979	579	7.98	19.54	0.40	12.49	2.00	4.61	7.15	46.18
February 1979	644	7.33	22.85	0.71	10.12	0.23	4.72	8.54	47.17
March 1979	686	8.75	24.53	0.70	20.41	2.15	4.79	7.39	59.98
April 1979	771	7.86	25.80	0.85	20.11	2.05	4.80	7.03	60.63
TOTAL (for year)	751	7.05	288.12	9.49	178.18	12.27	54.81	93.24	636.12
MODEL-BY-MODEL ANALYSES (post-1969 cars)									
Austin Morris Mini 850	574	6.40	15.24	0.37	10.37	0.86	4.06	5.82	36.72
Mini 1000	552	6.92	14.55	0.30	11.32	0.97	4.20	6.86	38.21
1100/1300	561	7.44	16.96	1.00	11.16	1.99	3.97	6.63	41.72
Allegro	737	5.39	21.59	0.90	4.91	0.69	4.38	7.28	39.74
Maxi 1500/1750	765	8.31	26.33	0.77	23.85	0.62	4.59	7.45	63.61
Marina 1300	847	6.25	24.16	0.50	15.30	1.22	4.27	7.48	52.95
Marina 1800	897	8.01	29.98	0.40	26.78	1.98	4.84	7.81	71.79
1800/2200	642	9.71	21.62	1.55	26.86	2.79	4.06	5.43	62.31
Princess	976	6.63	37.55	0.15	13.44	0.00	4.94	8.65	64.73
Chrysler Talbot Imp	396	8.63	15.06	1.15	8.45	0.00	3.54	5.95	34.14
Avenger	684	7.83	23.97	0.92	16.90	0.67	4.33	6.74	53.53
Hunter 1500/1750	828	8.11	26.66	0.53	25.04	2.03	4.19	8.77	67.22
Datsun Cherry	784	4.95	18.68	0.53	7.63	0.51	4.92	6.51	38.78
Sunny	800	5.53	22.65	0.54	8.51	0.77	5.45	6.32	44.23
Fiat 128/124	794	5.38	19.14	0.41	11.58	0.00	4.83	6.77	42.74
Fiat 500/127	433	9.12	11.60	0.25	16.93	0.00	4.62	6.10	39.50
Ford Escort 1100/Popular	665	8.17	22.17	0.56	18.34	0.75	4.30	8.24	54.36
Escort 1300	809	7.70	25.82	0.50	19.63	4.30	4.53	7.56	62.33
Cortina 1300	811	5.63	23.91	0.56	9.24	0.42	4.25	7.26	45.64
Cortina 1600	1061	6.48	32.80	0.51	20.72	2.16	4.66	7.85	68.69
Cortina 2000	1019	6.43	34.24	0.84	15.09	0.95	5.69	8.69	65.51
Capri 1600	833	6.60	29.08	0.62	10.28	0.86	5.18	8.89	54.91
Granada/Consul	1093	7.11	45.36	1.16	17.38	0.02	5.89	7.93	77.74
Rover 2000/3500	856	8.01	34.47	0.61	20.30	0.39	6.03	6.78	68.58
Triumph Toledo/Dolomite	680	7.08	22.77	0.77	9.13	3.59	4.82	7.04	48.12
Triumph 2000/PI	902	7.53	35.77	0.63	18.94	0.29	5.77	6.56	67.96
Simca 1000/1100	560	8.29	17.91	0.29	17.00	1.17	4.11	5.92	46.40
Vauxhall Viva	709	6.75	20.46	0.70	14.08	0.15	4.11	8.41	47.92
Chevette	815	5.07	21.84	0.83	5.22	0.26	4.63	8.53	41.30
Cavalier	1149	5.19	35.41	0.44	8.39	0.00	5.64	9.74	59.61
VW Beetle	568	6.89	18.49	0.44	7.76	0.00	4.10	8.33	39.12
Golf/Polo	789	4.99	24.21	0.09	3.10	0.00	5.01	6.96	39.37
All Chrysler UK	753	7.32	24.80	0.82	16.32	1.18	4.34	7.69	55.16
Ford	888	6.85	29.18	0.62	16.55	1.67	4.81	8.00	60.83
Leyland	715	7.39	23.53	0.91	15.35	1.20	4.65	7.21	52.84
Vauxhall	801	6.55	24.11	0.79	14.70	0.22	4.45	8.21	52.48
All British	786	7.06	25.52	0.78	15.67	1.21	4.65	7.67	55.50
All Fiat	674	6.66	18.33	0.50	13.60	0.02	5.11	7.26	44.83
Renault	787	6.94	22.20	0.40	19.62	0.42	4.87	7.13	54.64
Simca	542	8.02	17.24	0.23	14.80	0.92	4.38	5.91	43.48
Volvo	714	6.95	25.90	0.41	7.04	0.76	6.85	8.65	49.62
All French	783	6.72	22.69	0.42	17.18	0.57	4.94	6.81	52.59
Italian	671	6.75	20.23	0.47	11.65	0.02	5.58	7.37	45.31
Japanese	835	6.43	24.22	0.82	15.36	0.27	5.69	7.29	53.65
W German	878	6.47	27.61	0.46	14.14	1.74	5.52	7.38	56.84
All Foreign	788	6.62	23.95	0.53	14.44	0.67	5.43	7.17	52.19

Average monthly costs (£) excluding depreciation



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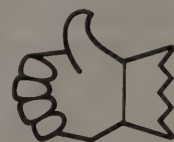
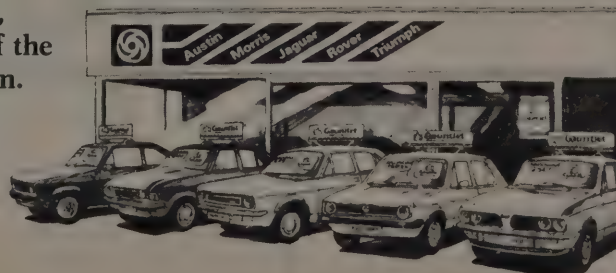
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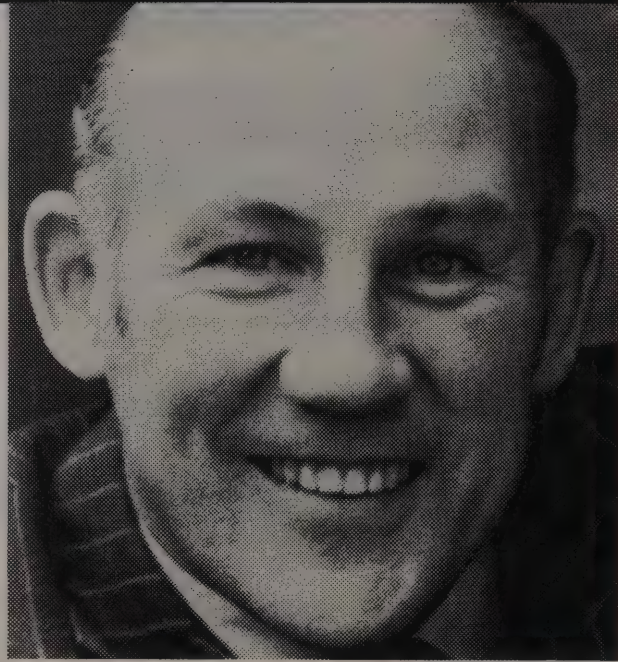


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'Protectol is now Britain's biggest name in rustproofing. Your local station should be just a short drive away. Call in, and I'm certain you'll agree it gives the best rustproofing a car can get. 'These three facts convince me.' (Stirling Moss)



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MONEY

Liquid assets

CURIOUSLY, the world's drive to save energy could create big dividends for investors. Shares in oil companies are the obvious favourites, and not only because they should benefit from the rising price of their product. The companies themselves have vast scope for fuel economies which can be fed into their profits.

Few people realise that the oil

giants use the equivalent of one tenth of the oil they produce—in tanker fuel (at sea and on the roads), and in power for their refineries. The Fawley refinery, for example, uses about the same amount of power as neighbouring Southampton, a city of more than 200,000 people.

All the major oil companies are initiating massive energy-saving programmes, and any well-balanced portfolio of shares should include some Shell, BP or Burmah.

Pilkington Brothers, the glass-makers, is another two-way winner, having cut its own consumption of energy by more than 8% in three years while at the same time benefiting from the spread of double-glazing and glassfibre insulation. Its profits have quadrupled since 1972.

An engineering heavyweight aiming to gain from the petrol-saving drive is Guest Keen and Nettlefolds. Its chairman, Battle-of-Britain pilot Sir Barrie Heath, stresses in his latest report to

shareholders: 'The swing to front-wheel drive, particularly marked in North America, is mainly a result of the need for fuel economy. Smaller, lighter cars in the US will soon resemble European cars in style and size.'

GKN is cashing-in on that swing by building a big new plant in North Carolina to make constant-velocity joints for front-wheel-drive transmissions.

Another engineering favourite is Green's Economiser, a Wakefield, W Yorkshire, firm with a 130-year-long record of helping industry to save energy. (Its founder, Edward Green, pioneered a method of using the waste heat from the steam boilers that powered textile mills.) The company's equipment is used in power stations to trap and re-use waste heat, and also in marine diesel engines and other installations. It has had a good profit record, and, although it suffered a setback in the first half of last year, there was a remarkable recovery in the second half that

looks like being sustained in the foreseeable future.

One of the most successful lines in the Holt Lloyd range of car-care products is Redex UCL. This company turned-in record profits of £3,500,000 for last year, an increase of more than 20%, and profits have more than doubled in three years.

Finally, a less-obvious beneficiary of the Save It campaign is Dreamland, Europe's biggest maker of electric blankets. Its profits jumped to nearly £1,200,000 last year, compared with £740,000 in 1977. Chairman Frederick Williams said that demand was strong throughout the year, winter and summer, adding: 'There is little doubt that the high cost of fuel and a concern throughout the world for energy conservation has encouraged the obvious economy of heating the bed and not the entire room'. And it helps you dream about your investments..

ROBERT HEAD



Monitor Monitor Monitor Monitor Monitor Monitor Monitor Monitor Monitor Monitor

continued from page 7

statistics, together with distance travelled, average speed, etc, are displayed on a fluorescent panel.



None so blind

Rene Herail, a lecturer in French at Leeds University, is pressing for worldwide adoption of this road sign in a bid to cut what he describes as 'an alarming toll of pedestrians involved in accidents while emerging from blind exits'.

The question is: would motorists identify the impending hazard?

When DRIVE asked AA staff colleagues to interpret the sign, no fewer than 16 wrong answers were recorded.

Among the suggestions submitted: 'Beware! Manchester United in town'; 'Danger—man swept away by waterfall'; 'Take care. Indian rope trick ahead'; 'Look-out for falling corkscrews'; even 'Beware of snakes running up your trouser leg'.

Blocking the drain

Every year, motorists throw 7½ million gallons of oil down the drain—quite literally, according to the Thames Water Authority. The 'villains', it seems, are DIY car owners, who dispose of old engine lubricant by

pouring it down roadside drains.

This illegal, anti-social practice is not only disruptive to sewage purification plants. It is depriving refineries of a valuable raw material, 60% of which can be recycled into a base for fresh oil.

The TWA, on behalf of water authorities throughout the UK, is appealing to garages to provide used-oil disposal facilities for drivers who service their own vehicles. Says a spokesman: 'Councils have largely turned a blind eye to the problem.'

Certainly, recycling specialists, like Braybrooke Chemical Services, of Stourport-on-Severn, Worcs, would like to get their hands on the oil. Director Ronald Braybrooke confirms: 'Recycling can save millions of pounds a year on the balance of payments.'

But the wasteful DIY owner, Braybrooke goes on, isn't the only concern. In the last five years, cowboy operators have muscled in, and their activities have forced up the price of old engine oil and reduced the amount of raw material reaching the refineries. 'They've taken a 50% slice of the market,' Braybrooke reports, 'by offering garages more money for the raw material, then selling it to factories as heating oil. In time, this can only increase the price the consumer pays for car oil. In other words, the raw material in the form of crude will have to continue to be imported.'

The remedy? 'It's in the government's hands,' says Braybrooke. 'It should insist that old oil goes only to recycling firms, not to the furnace...'

He would also like to see Britain follow W Germany's example,

and make it compulsory for motorists to dispose of used oil at official collection points.

Our Angela

Former DRIVE columnist Angela Rippon has added to her list of credits membership of the executive committee of The Order of the Road, an organisation founded 51 years ago to encourage safe and courteous driving. Angela, a reporter for the motoring programme *Top Gear* as well as a newscaster and television producer, often commutes—as DRIVE readers know—from her Dartmoor home to London.

The Order's chairman, the Marquess of Camden, said, as he welcomed Angela: 'Spreading the gospel of safety and courtesy on the road is made immeasurably easier if we can be seen to have the support of a public figure with a known interest in motoring.'

Remember: you read her first in DRIVE!

National savings

The United Kingdom has joined forces with 20 of the world's industrialised nations to make October the first-ever International Energy Conservation Month. So far, 50 energy-related events are in the pipeline for Britain, from specialist conferences to the more entertaining BP Petrol Saving Run.

The government's effort includes:

- A schools competition
- Six 'energy' films
- Publicity on conserving energy
- Testing more cars for mpg
- Programmes for local radio.

Comments Bernard Ingham, head of the energy-conservation

division at the Department of Energy: 'If any other country has a better programme, they are keeping extremely quiet about it.'

Seal of Approval

The AA's Seal of Approval has been awarded to Quinton Hazell's wheel-bearing kits and the Redex BCF 600gm fire extinguisher. Approval has lapsed on the Polysplice towrope and Monroe Auto Equipment's dampers and wiper blades.

Roads information

Numbers in parentheses refer to maps in the 1978-1979 edition of the AA *Members' Handbook*.

BRITAIN

Motorways open M8, Monkland motorway, Glasgow (A80-B7053), 1 mile (48); M180, Trent Bridge section (A161-M181), 5 miles (34).

Major roads open A9, north of Aviemore-Slochd, 8.5 miles (56); A9, Tain bypass, 1.5 miles (56); A585, Singleton bypass, 1 mile (30).

OVERSEAS

Austria Tauern Autobahn A10, Werfen-Eben (17.5km), now open.

France Tolls on most motorways increased about 5%. Motorways recently opened: Autoroute A8, La Turbie-Roquebrune (6km); Autoroute A36, Besançon-Gendrey (16km), and Mulhouse bypass (13km); Autoroute A61, Langon-Damazan/Aiguillon (58km), and Carcassonne bypass (10km); Autoroute A63, Cestas-Mios (10km).

Germany Autobahn A30, Bad Oeynhausen-Hannover, bypassing Stadthagen, now open.

Netherlands Autosnelweg A15, Gorinchem-Arnhem/Nijmegen, extended 8km east, Valburg-Ressen.

Spain Autopista A68, Bilbao-Zaragoza: Opening of toll motorway section Altube Junction (Puerto de Altube)-Logroño (88km) delayed. Logroño-Calahorra section (48.5km) due to open by end of year.



IT CAN'T BE right, can it? After all, in these fuel-conscious days, drivers of four-wheeled hairy gas-guzzlers are branded as ecological vandals. And many two-wheeled types can excuse their sporty little beasts by virtuously quoting their excellent fuel economy.

Yet there's a band of unrepentant bike men who are actually proud to be seen on machines that can slurp petrol and oil faster than several cars we know of. They *can't* be right—can they?

DRIVE resolved to investigate the world of the mega-cyclists, and ordered two of their favourite monsters — Harley-Davidson's 1300cc Electra Glide, and Moto Guzzi's 1000cc G5. They're expensive, they're the ultimate in conspicuous consumption—and they're shameless.

Harley-Davidson FLH-80 Price £3999

HARLEY-DAVIDSON forges legends in iron and steel, slings them between two wheels, and sells them as motorcycles. The buyers of these machines, it seems, thrive in a sub-culture that's littered with Levis and Coke, Chevy pick-ups and greasy T-shirts and girls that your mother wouldn't like. Few of them concede that there's any other form of motorcycling.

The undisputed leader of this pack is the FLH-80, best-known as the Electra Glide. The 80 refers to its engine capacity (measured in cubic inches in the US), but, if you really want to fit its image, then call it 'Th'ety koob' (80-cube), as they do in smoky Milwaukee, or a 'Hog' or 'Shovelhead' if you're more of a Blue Mountain boy.

In fact the FLH-80 is nothing more than a 1339cc version of the 74 Electra Glide—a 1207cc bike that first saw the light of day in 1941, which traces its ancestry back to 1922, and was the bike of the San Francisco original Hell's Angels. Its capacity was enlarged

Big spenders

because Harley-Davidson had long built the biggest motorcycle in the world, and was determined not to have its crown taken away by some sleek new cat out of the Rising Sun. (Kawasaki was planning a 1300cc four-stroke when the FLH-80 was announced a year ago.)

What a monster it is—a Jurassic survivor in a soft, smooth world. By any reasonable standards, the biggest bike of them all is *abominable*. Given half a chance, it will shake the teeth from your head, topple immovably on to your leg, and be outpaced by any fresh kid on his 200cc runabout. But, for all that, it provides a fascinating, almost hedonistic ride, after which all other motorcycles fade into insignificance. No man can fail to be moved by it—to one extreme or the other.

It's the FLH-80's blend of pure vintage motorcycling with modern disc brakes, comfortable suspension and electric starting that's either loved or hated. And

links with the past are very apparent—a hand-operated gear lever and foot clutch are still offered as options.

Riding the monster is much easier than its daunting weight and size suggest, though care has to be taken—especially when manhandling the brute.

Pressing the starter button produces the gorgeously old-fashioned whirr and whine of meshing gears—until the huge V-twin bursts into a mellow, bass chuckle.

Surprisingly enough, in heavy city traffic the FLH-80 is a delight, displaying a low-speed agility that puts many a smaller motorcycle to shame, even though it's accompanied by the bitter-sweet smell of oil burning at the rate of a pint per 300 miles!

Having to cater for the old American tradition of using the clutch as an infinitely variable gear, Harley-Davidson learned long ago to make clutches tougher and lighter than any

European or Japanese rival. Unfortunately, poorly designed switchgear and a crude gear-selector pedal spoil what could be an unusually pleasant set of controls. The seat is luxuriously comfortable, and fully adjustable for various rider and pillion loadings, and the footboards demonstrate just how unsatisfactory the foot-rests are on other touring machines. The pity is that, unless the seat's damping and springing are correctly tuned and the rear suspension properly adjusted, the Glide's resultant wallowing is unnerving—and the rider's right foot is forced off its footboard by a stupidly designed air cleaner that's big enough for a 42ton long-distance truck.

Despite the thoughtlessness of many FLH-80 details, it is still one of the best bikes ever built for satisfying highway cruising. This it does in the grand manner, barrelling along at a modest 60–70mph that invites the rider to relax, look around and admire the passing scenery. It *will* cruise at 80mph, but engine vibrations rise to an uncomfortable level, and the right foot's discomfort is aggravated by the footboard's high-frequency buzzing that vibrates the foot to its edge.

Braking is fair: the single front disc is inadequate and needs the help of a partner on the other side, but the rear brake is more useful than most of its kind. Very high pedal pressure is needed to exert any worthwhile braking power, which is no bad thing as it prevents the rear wheel locking—dangerous in the extreme on such a heavy machine.

A pair of auxiliary driving lamps are fitted as standard, but are rendered unnecessary thanks to a powerful 65/60w headlamp. Also standard are the wind-screen, luggage containers, crash bars, mudguard trim and other parts normally sold as extras on other machines. Harley-Davidson would do well to consider follow-

HOW THEY MEASURE UP	HARLEY-DAVIDSON FLH-80	MOTO GUZZI V1000 G5
Engine	Air-cooled ohv 4-stroke V twin 65bhp at 5400rpm	Air-cooled ohv 4-stroke V twin 71bhp at 6500rpm
Output		
Transmission	4-speed, lubricated exposed chain	5-speed shaft drive
Kerbweight	784lb	582lb
seat height	31in	31in
max width	33in (handlebars)	29½in (handlebars)
max length	94in	87½in
Fuel tank	3¾gal/171 miles plus 1gal reserve	4½gal/207 miles plus ¾gal reserve
Mpg—overall	45mpg	46mpg
quiet use	64mpg	59mpg
suburban use	44mpg	45mpg
brisk use	50mpg	56mpg
hard use	32mpg	37mpg
Performance—max (upright)	105mph	109mph
30–50mph (top)	5.4sec	4.9sec
0–50mph	5.9sec	4.7sec
Warranty	6 months/6000 miles parts and labour plus 1yr Autogard	6 months parts and labour, plus 1yr Autogard

where he works. He knows it's exactly 12 miles because, for the past year, he has been recording his commuting costs carefully—not for his usual Toyota saloon, but for an NVT Easy Rider 2 moped, loaned for a year by DRIVE.

NVT manufactures a range of mopeds, and this example features an automatic two-speed gearbox, ideal for coping with the steep hills around Bury—and our 12st test-rider.

In common with many car owners, 38-year-old David holds a current motorcycle licence. He owned a 125cc Honda a few years ago and, after putting NVT's Easy Rider through its paces, was sufficiently sold on the advantages of motorcycling to buy a 500cc Suzuki.

'My year's moped-riding has

certainly opened my eyes,' says David. 'Moped-users have the worst of both pedal- and motorcycle worlds. Car drivers treat you like a motorcyclist and expect you to respond like one; but in fact you have no more reserves of power than a pedal-cyclist.'

Despite these criticisms, David found the little Easy Rider surprisingly useful: 'Half my car commuting was done on a motorway, so I had to find another route. Even so, the journey took only 5min longer on the moped than in the car. Thankfully, Manchester is free of serious traffic jams, but, even so, I gained a lot of time on the last part of my moped trips to the city. The best thing about it was parking—as easy as leaving a

bicycle. Traffic wardens ignored it, so long as it was left out of harm's way.'

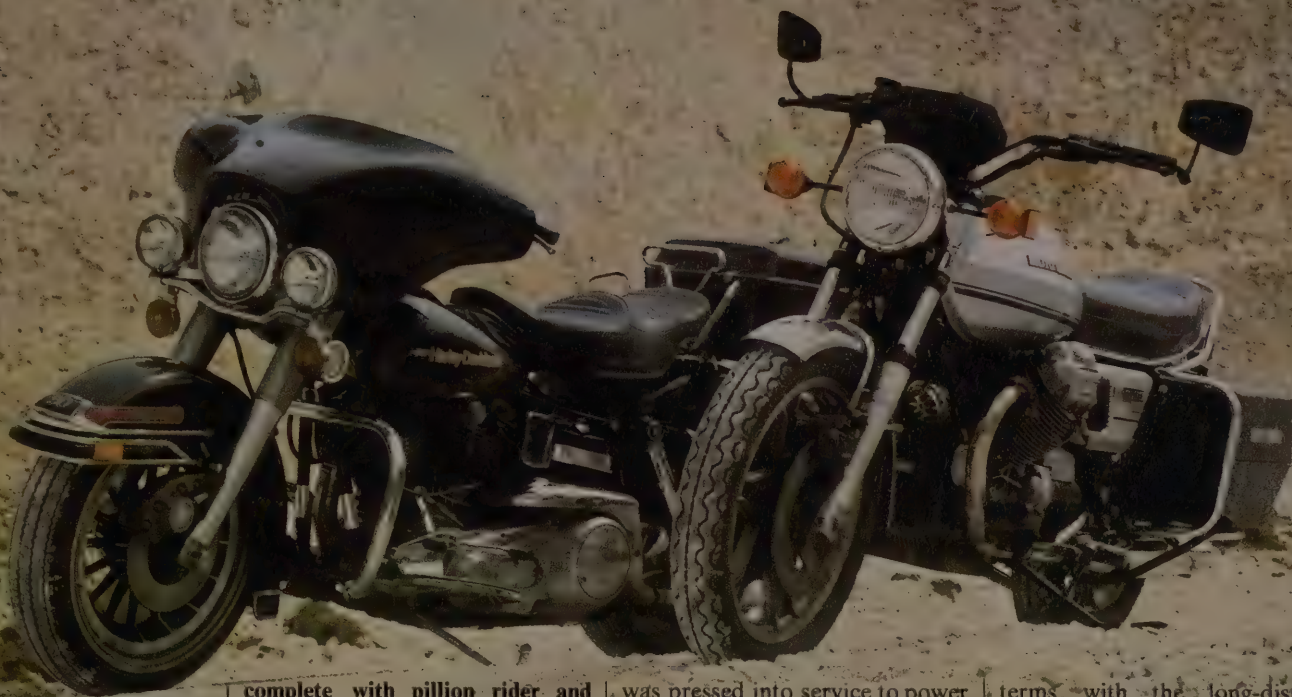
When NVT delivered the moped, it had been fully run-in and had undergone its first service. After that, David did all his own maintenance—not a difficult job: 'It runs like clockwork and never gave a moment's trouble. Only once was it difficult to start, and that was due to the metal plug cap shorting-out; I changed it for a plastic one. Otherwise, starting has been easy and reliable. All I have had to do is change the gearbox oil and adjust the rear chain. It was always properly garaged, and, after washing the car, I'd usually swill it over with the dregs; but I didn't mollycoddle it.'

The one element of moped

SAVE IT Mean machine

SO, are there worthwhile savings to be made on two wheels? Really, there's only one way to find out—which is why, last year, DRIVE asked a reader to give up his car for 12 months and do all his travelling on... a moped.

DAVID DAVIES travels 12 miles between his home in Bury, Gt Manchester, and the city bank



ing suit, for the standard of secondary equipment is shamefully third-rate. This criticism also applies to paintwork, chrome-plating, glass-fibre, and methods of clamping ancillaries.

Examples of the factory's apparent loss of interest in practical motorcycling were discovered on the two occasions that the test machine broke down: each time, it was due to shoddy wiring and wiring clips on the low-tension ignition system.

The big Electra Glide is, for all its shortcomings, a wonderful motorcycle—idiosyncratic, infuriating, bewildering and fun. Believe it or not, it can be a fuel miser, too. On one 65-70mph run of 200 miles,

complete with pillion rider and luggage, an average of 50mpg was recorded. And that's a profoundly satisfying way to use up the energy resources of the world—not with a bang but a Glide.

Motor Guzzi V1000 G5 Price £2554

MOTO GUZZI is to Italy what Harley-Davidson is to America and Triumph to Britain. It's Italy's biggest maker of bikes, a position won by a brave decision in 1970 to invest all that was left of its shrinking empire into a new, large-capacity bike.

Moto Guzzi (say, 'Gützi') lacked the funds to develop a new engine especially for the bike, but it did have a 700cc V-twin in its military tri-car, and this

was pressed into service to power Italy's two-wheeled renaissance—the transverse V-twin, shaft-driven touring V7 Ambassador.

Within two years, its capacity was raised to 750cc, and a sports version introduced. The engine then grew to 850cc, and eventually, in 1976, a full-blooded 1100 version was unleashed. It broke with tradition by offering riders 'automatic' transmission (very similar to Honda's later version, tested in DRIVE May-June issue), but the howl went up among aficionados for the same thing with gears. The result is the V1000 G5—not a sportster at all, but a top-class fourer that rates comfort above all else.

A big Guzzi is one of the few bikes that can compete on level

terms with the long-distance functionalism of a BMW and, as their numbers on the road demonstrate, a lot of experienced riders will claim that they are better. Certainly, these delightfully ugly machines offer unsurpassed high-speed stability, and the safest, most usefully powerful brakes currently available.

When car-style coupled brakes were first fitted to Moto Guzzi, most motorcyclists were suspicious, but now the word has spread that nothing can even remotely approach them for safety and power. The G5 is equipped with three disc brakes, one on the rear wheel and two on the front, and the front left disc is hydraulically coupled to the

continued on page 60

riding that did defeat David briefly was coping with last winter's weather: he found it too severe for comfort or peace of mind. The only other inconvenience was the need for 2-stroke petrol mixture. Few garages are equipped to deal with little two-strokes," says David. "They haven't the special oil required, nor can they deliver small quantities of petrol. I always bought my petrol in a can and mixed it with my own oil in the garage."

"I did find the headlamp inadequate away from city streets, but the ER2's lights are otherwise entirely satisfactory. I'm less impressed by the way the chain guard has rusted."

As DRIVE wheeled the NVT away after the year's experiment, David said: "I've grown to like it,

you know. Not so long ago, I did 80 miles one Saturday afternoon, just having a spin over the moors. It was very comfortable, the brakes were excellent... and the outing cost me only 50p."



Dave Minton

The Accounts

By leaving his car in the garage for most of a year, David saved £122 on petrol, didn't spend an expected £60 on maintenance, and slowed down his car's depreciation by an estimated £50. He kept it insured and road-taxed, so there were no economies there; nevertheless, his total saving for the year was £232.

He did, however, have to spend something on travel by moped—£16 on petrol, £5 for road tax, £13 for insurance and repairs, and we have to allow £70 for depreciation on the bike. DRIVE's method of working out running costs also allows for loss of interest on the capital you have tied up in your vehicle—in the case of the £200 moped, just £15. And, of course, there was the

one-time investment in £34-worth of helmet and protective clothing. That adds up to £153.

David's total profit (the car-savings less bike-costs)—£79.

DAVE MINTON

P.S. David could, of course, have travelled to work by public transport—a bus/train and foot journey. It would have taken twice as long as the moped or the car, and cost more than twice the moped price.

THE BIKE	NVT Easy Rider 2
Engine	Air-cooled 2-stroke single
Transmission	2-speed auto-exposed chain
Kerbweight	110lb
seat height	30in
max width	28in (w/bats)
max length	66in
Fuel tank	2gal/79 miles + 10/16-mile res
range (overall)	120
Performance	30mph max legal
Warranty	6 months parts/labour

Peugeot 305GRD

Price £4798 On the road £4957

Once upon a time, British motorists wanted diesel engines as much as they wanted sunroofs for their bootlids. After all, they reasoned, the diesel-engined road vehicle—derv—cost more to buy than its petrol counterpart, and was noisy, smelly and slow. Who needed that, just for extra miles per gallon?

Now, the firm prejudices of car buyers and designers alike have been given the sheikhs by rising petrol prices. Volkswagen took the first plunge into the budget end of the derv market in 1978 with the Golf LD, and others were sure to follow...

Enter the Peugeot 305GRD. Unconvinced by the hatchback bandwagon, the French company's econo-car is a plush-but-conventional three-box saloon. What's new is under the bonnet—a smart, transverse, aluminium diesel engine. DRIVE joined the growing queue at the local filling station's derv pump...

How it goes

There's none of the diesel engine's usual start/stop paraphernalia on the GRD, just a simple key switch. Before starting from cold, the key must be held in its second position for about 20sec, but, once the glow-plug's warning lamp on the fascia goes out, there are no further delays.

The engine idles reliably and pulls away without any signs of temperament. Don't expect sparkling acceleration, though, for no current diesel engine can match a petrol unit of similar capacity. It takes the 305GRD half as long again as the 1500cc petrol-powered 305 to reach 60mph from rest—a lethargic 21.6sec—and 4.6sec longer to accelerate from 30–50mph in top gear. Maximum speed also falls by 14mph to a modest 80mph. Times such as these mean that a determined GRD driver may get the better of an Austin Morris Mini 850 or Ford Escort 1100, but little else. Maintaining a reasonable pace means foot-on-the-boards driving, and the lack of punch is embarrassingly apparent when hill-climbing, or overtaking—a manoeuvre that demands a clairvoyant's sense of anticipation. The lighter, more-powerful Volkswagen Golf diesel has a far lower handicap in this respect.

Speeds in the lower gears are governed to 24, 40 and 60mph maximums, so it's as well to change up slightly before each limit, or the engine suddenly goes flat. Unfortunately, when top is reached, it feels so undergeared that DRIVE's testers kept reaching for a non-existent fifth gear. While it's not as precise as some,

the gear lever's action is easy-going, and the clutch pedal feels light and progressive.

To compensate for the diesel engine's extra weight, Peugeot uses lower-geared steering than that in normal 305s. The result is that the steering's weight and feel remain acceptable—at the expense of more wheel-twirling on roundabouts and while parking—and the mechanism is delightfully free from the tugs and twitches that beset many front-wheel-driven cars. This, together with a well-contrived, fully independent suspension, gives handling that's dignified rather than nimble, which suits the car's solid, dependable character. The GRD tilts less in hard cornering than 304s did of old, and it doesn't put a wheel wrong on bumpy bends.

Only Peugeot owners will feel immediately at home behind the steering wheel. The seat's base encourages an erect posture, but the backrest offers too much support low down and too little higher up; the trick is to lean back and relax. Pedals are generously large and well-spaced, but the footwell is awkwardly shaped for a lazing left foot.

Instrumentation is seen clearly through the large, padded steering wheel, and is pleasingly less fussy than in previous Peugeots—though there are still more kph than mph markings on the speed-

ometer. Apart from coolant-temperature and fuel gauges, two groups of warning lamps alert the driver to all the usual major problems, plus handbrake-on, brake-failure and diesel-glow-plug-in-action.

Twin column stalks move in directions that are bewildering until one learns their strange logic; DRIVE hopes it won't be long before Peugeot uses the new, simplified controls of the 505 in the rest of its range. We did like the large push-button switches with their dual-intensity illumination.

Vision is good all round, and powerful head-, reversing and rear foglamps ensure that you can see and be seen, while a headlamp wash/wipe system helps it stay that way. Only the windscreen's wipers let down the side by confronting the driver with large unswept areas. Like too many Continental imports, Peugeot hasn't converted the blades to suit British drivers.

How comfortable

In dawn's light, the diesel's death rattle at idling speed will not endear you to the neighbours, and it makes novice diesel drivers wonder if the car will reach the end of the road before it rolls over and dies. Once under way, the engine settles down to a contented hum no louder than most petrol engines of its size—it's just a different type of noise. As the car approaches 60mph, though, an ear-bashing boom builds up, and it only worsens the faster you try to escape it. It's a pity, for Peugeot has succeeded in eliminating the vibrations and smell usually associated with diesels. Disappointing, too, to find smooth driving made difficult by a diesel fuel pump that effectively imitates a jerking accelerator; Volkswagen has already proved very effectively in its Golf diesel that this design problem can be overcome.

The 305 may not cosset its passengers with the magic-carpet ride of its cousin-by-marriage, the Citroen GS, but it's a cut above most of the competition. The GRD's unflurried progress over the worst of British roads is impressive, though not without bump-thump in the rough and the occasional jolt from short, sharp ridges.

If the ride is stately, the bright and airy interior, with its sumptuous trim, verges on the majestic. Sitting in the back convinced us that passengers will prefer it to the front—it's one of the best rear seats in this class for cosy comfort. Knee- and leg-room are good, and there's no restrictive central hump, either; our niggles are confined to the limited headroom and the hard bar at the base of the front seats—



HOW GOOD

At-a-glance

DRIVE's verdict on the Peugeot 305GRD, taking into consideration its rivals, its price and what kind of car it's *meant* to be

Out of 10

PERFORMANCE

●●●

FUEL ECONOMY

●●●●●●●●

HANDLING/STEERING

●●●●

COMFORT/REFINEMENT

●●●●●●

INTERIOR/BOOT SPACE

●●●●●

PASSENGER AIDS

●●●●●

DRIVER AIDS

●●●●

ACCIDENT/INJURY SAFEGUARDS

●●●●●●●

RUST RESISTANCE

●●●●●●●●

RELIABILITY/EASE OF REPAIR

●●●●●

PEUGEOT 305GRD

Front engine: 1548cc/4cyl, OHC (chain); Bosch diesel injection; 49bhp at 5000rpm
Front drive: 4 gears; 16.8mph/1000rpm
Suspension: front—ind damper/struts, anti-roll bar; rear—ind trailing arms, coil springs, anti-roll bar
Steering: rack and pinion, 4 turns/32 $\frac{1}{4}$ ft circle; 4 $\frac{1}{2}$ J wheels, 145SR 14 radials
Brakes: discs front/drums rear

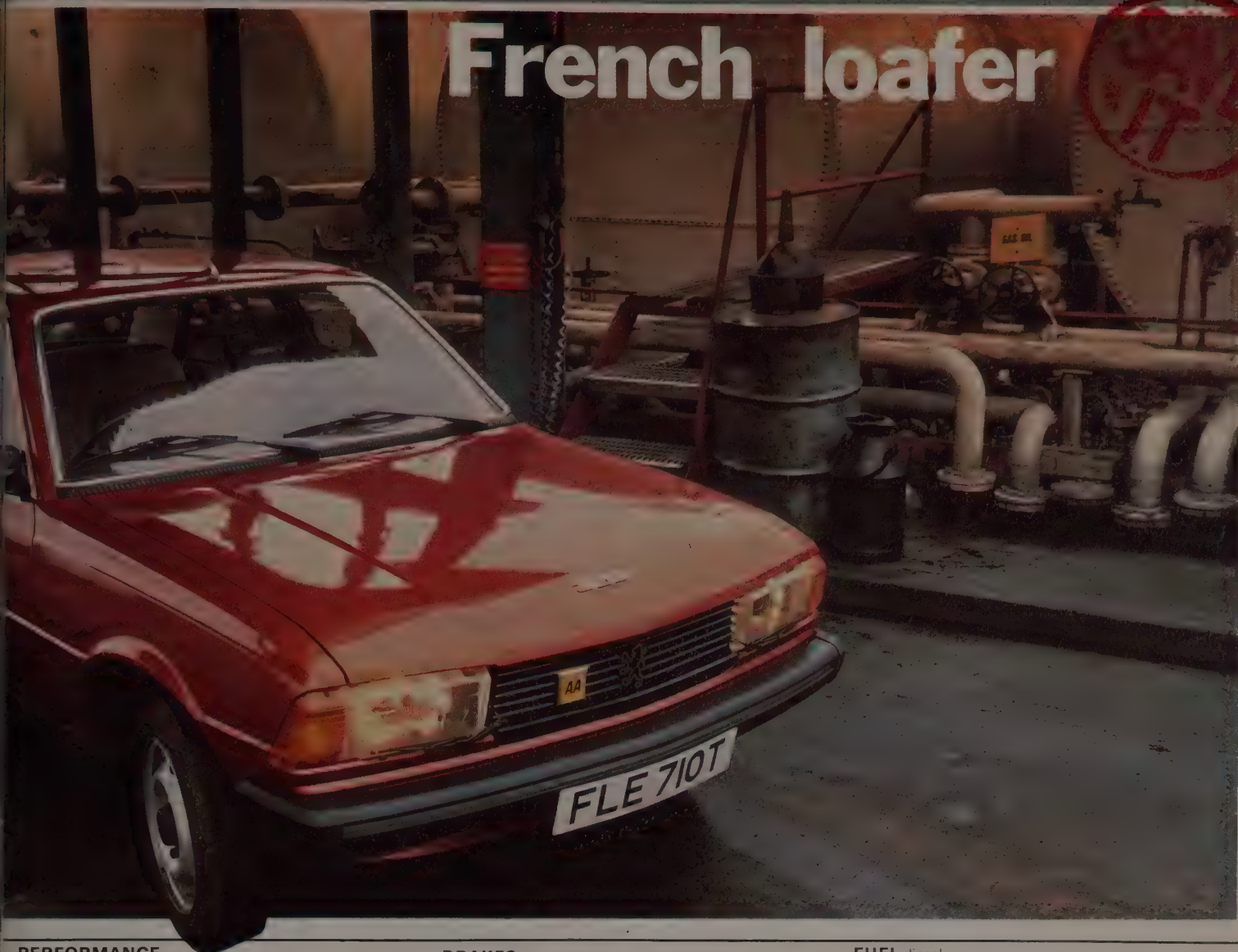
Parts/repairs (inc VAT)
clutch £108.09 (fitting 4.5hr)
exhaust £78.55 (1.25hr)
headlamp unit £27.87 (0.5hr)
front bumper £54.47 (0.75hr)
laminated windscreen £45.54 (2hr)
oil filter £3.09 (0.25hr)
major service 6000 miles (2.5hr average)

	per year	per mile
Running costs	£658.35	5.48p
Loss of value	N/A	N/A
Total depreciation	N/A	N/A
Insurance group	4 (provisional)	

THE RIVALS CLOCK IN

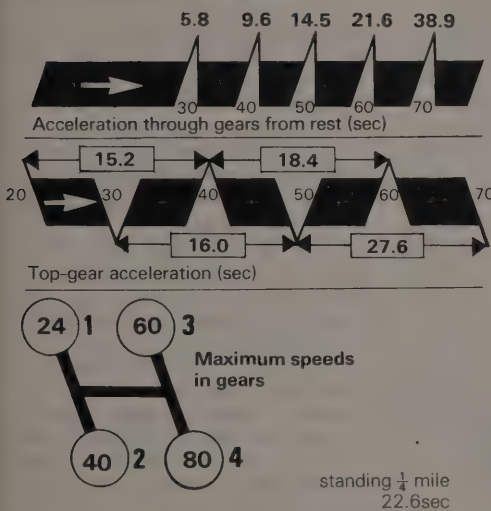
Peugeot 305GR (petrol)
Peugeot 305SR (petrol)
Peugeot 504 diesel
Volkswagen Golf LD (diesel)

French loafer

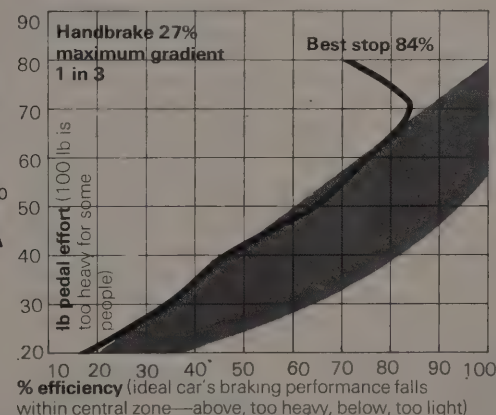


Jan Dawson

PERFORMANCE



BRAKES—pedal pressures and responses



FUEL diesel

overall consumption 46mpg
effective tank range 400 miles/8½gal

Normal range of consumption

motorway—68mph cruising	38½mpg
hard driving, heavy traffic	38½mpg
short journey, suburban	43mpg
mixed roads—brisk, 50mph cruising	45½mpg
quiet rural—40mph cruising	57½mpg

Consumption at steady speeds

30mph	80½mpg
56mph	49½mpg
70mph	37mpg
max mph	28½mpg

SAFETY CHECKS O = factory fitted option

steering: energy absorbing?	Yes	hazard warning: fitted?	Yes
front seats: secure mounts?	Yes	interior: well padded?	No
head restraint?	O	w/screen: laminated?	O
front belts: effective?	Yes	doors: crashproof?	Yes
convenient?	Yes	childproof?	Yes
rear belts: fitted?	Yes	petrol: spillproof?	Yes
		brakes: failsafe?	Yes
		load sensitive?	Yes

PRICE (£)	CAPACITY (CC)	FUEL OVERALL (MPG)	MAXIMUM SPEED (MPH)	0-60MPH (SEC)	30-50MPH IN TOP (SEC)	BEST STOP (% g/lb)	OVERALL LENGTH (FT/IN)	MAXIMUM LEGROOM FRONT (IN)	TYPICAL LEGROOM REAR (IN)	STEERING TURNS/ CIRCLE (FT)
4284	1290	33½	88	15.8	13.1	88/35	13' 10"	41½	38½	3½/32½
4668	1472	34½	94	14.1	11.4	88/35	13' 10"	41½	38½	3½/32½
5479	1948	38½	83	23.3	14.1	N/A	14' 9"	41½	39	4½/33
4481	1471	51	85	18.2	13.6	N/A	12' 2½"	40½	38	3½/32½

shin level for the rear-seat riders.

It may not boast a long list of lavish extras, but what equipment the GRD has is, for the most part, well-finished and of good quality. We were annoyed, however, by the clock, positioned in such a way that the driver cannot see it, and by the ashtray that raps your knuckles every time you change gear.

Illuminated heater controls are clearly marked and make it easy to achieve a warm-toes, cool-face atmosphere, and, while air distribution around the footwell could be more even, it does manage to reach rear passengers' feet. Demisting is prompt, and the fresh-air ventilators are sufficiently powerful to prevent passengers getting hot under the collar.

How strong

We doubt if this report has yet made many converts to derv driving, but there really are advantages—not least that of mechanical reliability. As diesel fuel is ignited by compression only, there's none of the petrol engine's sophisticated electrical system to go wrong—the most-common cause of breakdowns. There's no carburettor to keep in tune, either, and a coupled injection pump (sealed to prevent owners tampering with its settings) is claimed to need little maintenance. In theory, a diesel should also have a long service life, thanks to the necessarily strict assembly standards and a design that's more robust than most petrol units.

Body life looks good, too. A rugged pvc-type compound had been scrupulously applied under the test-car's wheelarches and along the vulnerable outboard sections of the floorpan, while the centre sections had a good coating of thick, black wax. Doors and closed box sections had been wax-injected, too, and there are no mudtraps under the contoured wheelarches.

The dull finish on our test car spoiled the overall appearance of Peugeot's usually good metallic paint, but there's a pleasing absence of bright body trim—

the source of corrosion problems on some costlier Peugeot that we have seen recently.

How safe

Unlike petrol-powered 305s, there's no brake servo for the diesel. To compensate, Peugeot has used softer brake linings—a sensible change that has resulted in the sort of pedal loads and progression that DRIVE testers look for, in total contrast to Peugeot's servo-assisted systems, which require very delicate footwork. The test car's drawbacks were that emergency stopping power was unsatisfactory, repeated use induced brake fade, and the level of brake-squeal was almost unrivalled.

Roadholding is safe and self-controlled, the GRD's nose running progressively wider during hard cornering, scrubbing off more speed the faster one travels. Should the throttle be injudiciously released in mid-corner, the nose meekly returns to the intended course.

The top seatbelt mountings are set rather low, encouraging the webbing to fall off the shoulder of shorter front passengers, but otherwise the 305's injury-prevention is well up to standard.

How much

Gallon for gallon, diesel fuel costs a few pence more than petrol, so most misers make the switch to derv for the extra mpg. Overall, the GRD returned 46mpg in 1000 miles of mixed driving, while its petrol-drinking brother covered a similar test marathon at 34½mpg—and you don't have to buy a calculator to realise that that is a substantial saving. Currently, the only petrol-fuelled cars that can rival the Peugeot's consumption of diesel are the humble two-cylinder Citroens, Fiat's 126, and three-wheeled Reliants; but, as one tester said, 'I can't think of any *real* cars that come close.'

The diesel engine's economy operates throughout the spectrum of driving tactics, but the biggest fuel savings are made in short-journey work around town (43mpg) and in quiet rural runs

(57½mpg). At higher constant speeds, such as motorway driving, the savings are less impressive but still worthwhile, though it's worth pointing out that VW's Golf diesel manages to be quicker than the Peugeot and use less fuel.

Ironically, a diesel driver is sometimes obliged to drive more miles in search of a suitable fuel station; derv pumps are thin on the ground in some parts of the country. It's also a messy fuel, so you have to avoid getting it on your hands or clothing. Thankfully, the Peugeot is an easy car to refuel to the brim, and most owners should manage 400 miles between refills.

Peugeot wipes some of the smile off the GRD owner's face by recommending a major service every 6000 miles with an oil and filter change mid-term; and, though there's less to go wrong with a diesel, we strongly recommend that it's left to experts.

The purchase price of the GRD is considerably higher than its petrol counterpart, and parts prices aren't cheap, either. It's too early to assess depreciation, but the Peugeot could fare well, as, presently, it is one of only two intermediate-size family saloons with a diesel engine.

Verdict

After 1000 miles of varied driving, DRIVE's testers were deeply touched—in the wallet—by the GRD's frugal use of fuel. The real price of GRD motoring is paid in the currency of road-going performance, but, if you're a leisurely town motorist, you'll think it a bargain worth having. Long-distance commuters get less of a good deal, though the Peugeot's comforting cabin will help to compensate for the time and noise.

That said, it must be recognised that DRIVE's drivers are motoring enthusiasts first and cost-cutting accountants second, and the diesel-owners among our test team have already voted with their overdrafts for the cheaper, faster and more economical diesel hatchback from Germany. But for cost-cutters who prefer comfort as only the French can offer, the 305 should be just the diesel job.



They may not look it, but the trio above is unique, composed of the only private motorists to be consulted regularly in a UK magazine's car tests—driving the professional testers' cars, and giving the *buyer's* verdict. This issue, Claire Parker, 25-year-old member of the Institute of Advanced Motorists and a Whitchurch, Hants, housewife, and Fred Pocock, 50-year-old building consultant from N London, are joined by Ron Daly.

Ron, 32, is an air-traffic control officer at Heathrow Airport, and he clocks-up 90 miles a day commuting from his Thatcham, Berks, home along the M4 in a 1600cc Volkswagen Golf S—which has given almost 90,000 miles of reliable service.

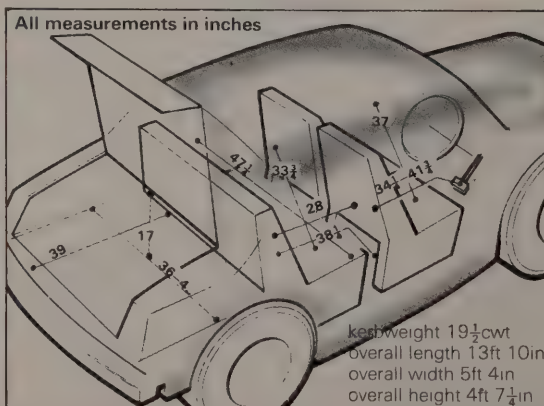
The panel's majority verdict on the diesel Peugeot was: 'Nice body—shame about the engine.'

'It's a slow plodder,' said Ron. 'The diesel's got enough torque to reduce gear changing around town, but, on the open road, I think that it's underpowered to the point of being dangerous. You've got to drive within its limitations. The soft seats and good finish are let down by the engine's noise—it gets uncomfortable above 60mph, which is no good for my motorway driving.'

Claire held even stronger views: 'I felt unsafe and frustrated. I couldn't risk overtaking a 35mph horsebox, and the diesel's lack of power was a menace at uncontrolled junctions, too. You just wouldn't be able to filter safely into fast traffic. All right, it did corner safely—but then it *couldn't* go too fast. If this Peugeot were a present, I'd give it away.'

'The body's typically Peugeot,' said Fred, 'solid and comfortable. I'm used to diesels, and this one's a good plodder. The snags were that it took me two miles to overtake anything; the drumming noise at 70mph almost made me sick; and I'd need earplugs to block out its tickover. That said, I'm a plodding driver, and diesel engines do have a long life, so I'd consider an estate version.'

DRIVE car-tester Peter Denayer comments: 'The biggest surge in petrol prices occurred *after* this test day, so the panel might now like this 47mpg Peugeot!'





GREAT ESCAPES Tall in the saddle

STANDING IMPOSINGLY four-square, all Gothic battlements and ivy, Whitwell Hall has seen the carriage trade, from landaus to Lancias, come and go along its sweeping drive. It had never seen anything like us.

Narrowly avoiding a collision with an overfed pheasant, my wife Ann and I rode up to the stately N Yorkshire mansion-cum-hotel, wearing little more than sweat and bicycle clips. We were about to test my firm belief that a cycling holiday need not sacrifice the luxuries of a good pull-in with private bath and haute cuisine.

To be honest, it wasn't exactly my idea. An enterprising travel company, Ryedale Travel, in nearby Helmsley, had thought of it first. Why not combine the chain of comfortable hostleries that borders the local moors with the fashionable yen by professional classes to switch from four wheels to two? That was the fond hope.

For conservative types, this really was flying in the face of convention. Ever since the first velocipede, it has been taken for granted that cycling is synonymous with suffering—needing only frugal youth hostels or cycling-club B&B simplicity.

It seems that I lacked the vital ingredient for cycling—a waistline shrinking in direct ratio to the world's oil reserves. My cycling holiday also taught me that there is far more to energy conservation than meets the eye. Riding a bike may save petrol, but I doubt if it's cheaper on another miles-per-gallon basis . . . At around 60mpg, our tour seemed unbeatable economy—until I worked out that a gallon of the local best beer was costing around £3.20 to refuel the thirsty pedaller.

No horse ever stopped more gladly at a trough than we did at almost every one of those temptingly cosy Yorkshire inns. Friendly, too. Instead of being

just blurs through a car window, they became firmly fixed and happy memories.

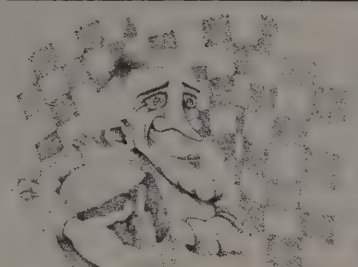
We also got through a few gallons of tea—often provided free by hospitable villagers. Those who sometimes regard the motorist as a pest extend an old-fashioned courtesy to cyclists.

Scruffy though we often looked, the reception we got—at stately Whitwell Hall as well as the small country hotels and inns in which we spent each night—was as friendly as anyone arriving by Rolls would get.

At the ancient Coachman Inn, in the small village of Snainton, we could park our bikes outside our own front door. Several of the old stables have been transformed into pleasant little guest-rooms, with private baths in which we could ease the stiffness of riding. The meals, which have just won a tourist authority award, were just what was needed to satisfy a cyclist's healthy appetite.

I also learned a few sensible tips about cycle touring without killing yourself. First, don't overdo

it for the first day or two—seven to 10 miles is plenty until your muscles get unwound. Second, wear practical clothes such as shorts and sports shirt, with a woolly in your saddle-bag in case it gets cold. (We set off in trousers, but they proved uncomfortable over long distances.) Third, take your time—the joy of cycling is being able to absorb all those quiet country charms so often missed when driving. (Though, it's surprising how far you can travel without realising it—20 or 30 miles a day can prove easy.) Ryedale Travel's modern-style bikes came equipped with roomy saddle bag, puncture kit, first-aid box, large-scale map and even plastic rainproofs. BILL GLENTON *Cost of a week staying at different small hotels and inns (including bike) is £59.50. For the same price, Ryedale Travel also offers a stay at one hotel with cycle included. There is also a cheaper deal with youth hostel accommodation provided. Contact Ryedale Travel, Helmsley, N Yorkshire; tel (STD 04392) 282.*



MOTOR SPORT

Race relations

WHERE DOES motor sport stand in the energy crisis? It stands in the public pillory, accused of being the most offensive of all the sports because it burns valuable petrol while the nation is being urged to Save It.

Sooner rather than later, I expect someone to stand in the House and demand that motor sport be banned or reduced because its petrol consumption sets a bad example to the rest of the country. To help that politician, I offer some figures on fuel.

Take a typical club race meeting at Donington Park, with six 10-lap races watched by 10,000 spectators. The amount of petrol consumed will be in the order of 9500gal!

But of that grand total only 500gal will have been burned by the racers, for the vast majority is consumed by the spectators' far-less-hairy cars.

It's a simple sum. A competition car does about 12mpg, so a 10-

lap race uses about 2gal per car. A grid-full of 20 therefore use about 40gal per race—a total of 240gal. Allow the same for practice, and you've used only 500gal.

On the other side of the crash barrier, 10,000 spectators have used 3000 cars to reach the race track. A modest 3gal of petrol for them adds up to 9000gal.

Where does the greatest potential fuel-saving lie?

Take other tens of thousands driving to watch tennis, golf, cricket and horse racing, and you have countless thousands of gallons being used. But will these sports be lambasted for being gas-guzzling pastimes? Never.

The real way to save fuel, I suggest, is not to ban or limit any of the sports, but to control the spectators' transport.

Motor sport's governing body in Britain has already discussed plans to make an across-the-board reduction of 10% in motor sport's use of fuel as a gesture towards energy conservation. Politically, it is important for motor sport to be seen to be making such a gesture. Such a reduction in a year would hardly amount to enough fuel saved to fill the cars in one spectator car park at Ascot. But it's right to be seen to be saving it.

But will the controllers of horse-racing, tennis, golf *et al* effect a similar reduction by reducing the number of events they run? I doubt it.

Perhaps the Minister for Energy will consider the amount of petrol consumed by spectators in all sports before he produces his inevitable axe. Perhaps . . .

NICK BRITTAN



WORLD-WIDE

Baby Benz?

ARE THE hard (energy) times really here to stay? Confirmed large-car specialist Daimler-Benz thinks so, and is developing a new small Mercedes as quickly as it can. Likely to be launched in 1981, it has a 1.6litre engine and will be more compact in all dimensions than any Mercedes made since the W German boom started, in the 1950s. The mini-Merc will be made at Bremen, once the headquarters of Borgward.

Ford has great expectations of its Proco—'programmed combustion'—petrol engine. This petrol-saving unit, using carefully controlled combustion chamber design and operation for fuel economy, has yet to go into production. Could it be that Ford fears the Proco's high-precision machining requirements may not be attainable in mass-production? Certainly, Ford has started talks with Cummins, the diesel-engine makers, about a small, lightweight engine for private cars.

It took Volkswagen's top-of-the-range Audi 100 to show the world that there's nothing wrong with an odd number of cylinders—something that truck-engine designers could have told the car makers years ago. Now BL is taking an interest in the odd-cylinder idea. Several three-cylinder prototypes are running around the Midlands on long-term test. Initial findings are that, in a fairly small engine, these cylinders are about as smooth as four, and have, if anything, better low-speed pulling power. They also use less fuel.

As motor manufacturers approach the 1980s with a largely fuel-thirsty collection of 1970s engines, expect to see wider use of the turbocharger. It's a designer's dream, using otherwise-wasted exhaust gas to drive a turbine that blows more fuel/air mixture into the engine. Hitherto, turbos have been used as out-and-out performance boosters (911 Porsche Turbo), but they can also give the best of both worlds: a turbo-charged 2litre can be sparing on fuel when driven normally, yet accelerate like a 3litre when required. IAN WEBB



Quick savings



I REGULARLY receive letters from meticulously careful drivers who are bewildered and frequently annoyed by the unexpectedly high fuel consumption of cars bought on the 'advice' of government figures. I often have difficulty explaining to them that it is traffic-flow conditions in and around towns, and slow progress, that swallow fuel as effectively as fast motoring.

Recently, BMW sent three of its 733i saloons (one a 4-speed manual, the others automatics) on a 24hr drive down the longest continuous motorway in Europe—Dunkirk to Reggio di Calabria, in southern Italy—to prove that three adults can travel very quickly by car to sun and sea, and for as 'little' as it costs to fly.

All right, it's possible to dismiss the whole thing as a stunt—an advertisement for a large and expensive car, a waste of precious fuel, an ego trip for the drivers involved. Or you can accept it, as I did, as an opportunity to carry out average-speed and fuel-consumption tests, to compare them with the government's findings, and to draw a number of inferences.

Traffic, road and weather conditions

varied as much as the temperament and driving style of the three people in my particular car, each of whom took it in turns to cover the 1666.6 miles in 22hr 25min of actual motoring time—an average 74.3mph, with overall fuel consumption of 19.1mpg. With speed limits on French and Italian motorways of 81½mph and 87½mph, and many repair sections where permitted speeds could be as low as 50mph, this meant motoring fast wherever circumstances allowed.

Congestion near and around Lille, Paris, Rome and Naples were as noticeable delaying factors as the fog, hailstorms, high winds and torrential rain that hampered rapid progress in the mountainous parts of France and Italy. But, wherever a steady speed, even relatively high speeds, could be sustained, fuel consumption, though appreciably better, never was as good as the government's steady-speed results obtained on the 'rolling road'.

Probably the most significant fact to emerge from the dash to Reggio di Calabria was that fuel consumption under actual driving conditions was related to traffic-flow and to road layout more than to average speed, and that lowering M-way limits would *not* result in fuel savings.

At speeds between 38 and 70mph, fuel consumption was almost constant at 21–21½ mpg; only during slow progress on urban motorways and fast motoring in mountainous regions did mpg drop significantly.

This fact contradicts all popular views that speed is the prime fuel-guzzling villain, and is notably at variance with fuel-consumption tests carried out under standardised conditions at steady speeds on traffic-free proving-grounds. For these suggest that, at a constant 38mph, you could expect 31mpg from your BMW, while 70mph would cut this to 24mpg.

The BMWs used on the run were not outstanding examples of low weight or low aerodynamic drag, nor did they have high final-drive ratios—measures currently being adopted by the motor industry to stretch fuel. Quite simply, good mpg was achieved by 'reading' the road well ahead, and controlling progress by smooth action; above all, avoiding a lead-footed approach to driving.

(One of the other crews, which lopped off about 13min over the same distance, achieved that at the price of a fuel-consumption penalty of nearly 16%: it had a car with an automatic gearbox, and adopted a more aggressive driving style. The other crew, using a cruise-control, averaged 18.4mpg and achieved a 70mph average speed.)

High average speed *alone* does not have the fuel-guzzling effect most of us assume it to have. There is more to motoring than scientific logic. A generous speed limit prevents 'bunching' and allows drivers to travel at their own speeds. For most motorists, this means burning less fuel than they would on a normal cross-country route.

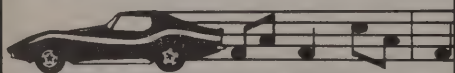
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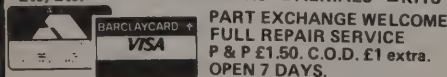
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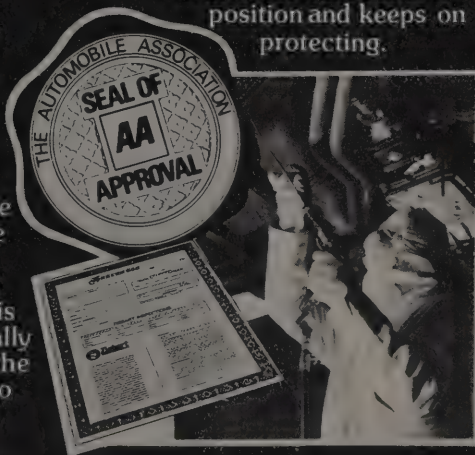
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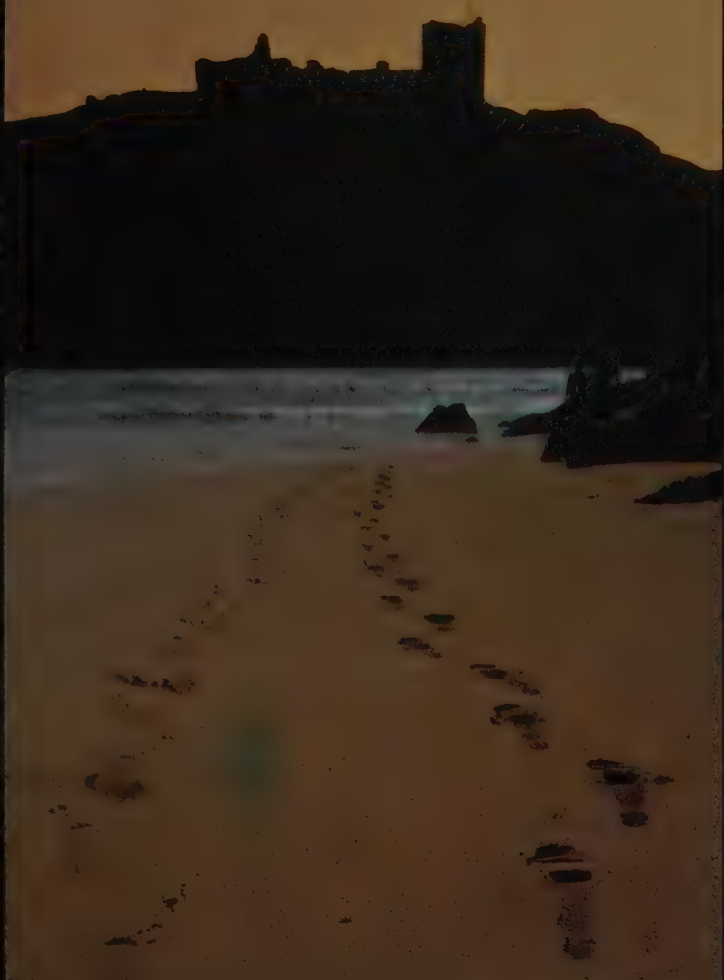
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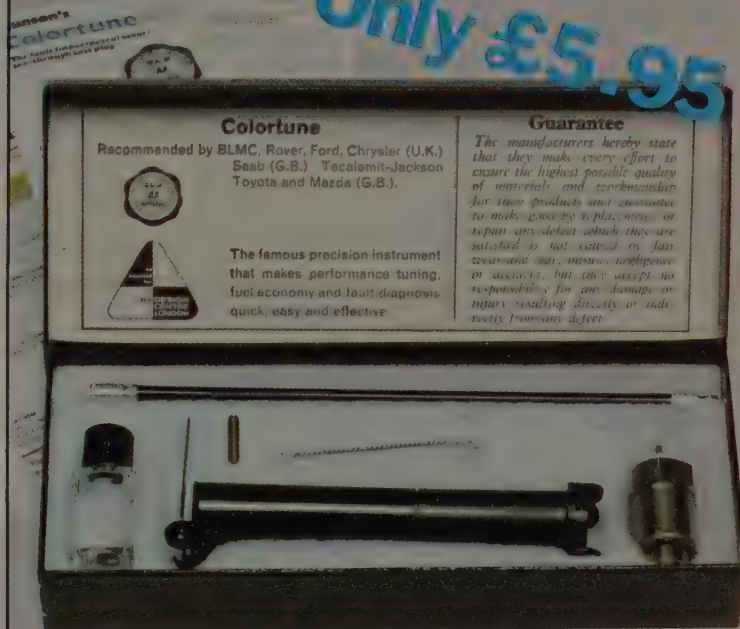
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Seven years ago, the original Audi 80 launched Volkswagen's front-wheel-drive success story. The ailing Beetle maker had wisely bought Audi's fwd experience in its search for new models, and the deal included the fabulous 1.6litre engine that powered the 80 to successful European sales.

VW's Passat followed, virtually an 80 in disguise, and the VW Polo started life as an Audi, too. Now, the 80 has earned a relaunch. The familiar 1600cc engine and chassis have been clad by VW Scirocco-stylist Giugiaro in a longer, wider body that combines with a larger wheelbase and track to resemble the chunky Audi 100. There are also bigger price-tags for the three-model range.

DRIVE ordered the middling GLS version to discover if 1.6litres can ever be value for 2litre money...

How it goes

The GLS's 85bhp engine is identical to that in VW's Scirocco and Passat GLS models, with overall gearing midway between the two. At 18½cwt, the big new 80GLS is only ¼cwt heftier than the Passat, which helps towards its lively accelerator response.

In fact, this impressive and deceptively easy-going engine propels the Audi with all the verve of an Alfa Romeo Giulietta—and with far fewer complications. It loves to be revved, yet can also pull sweetly and strongly from below 25mph.

The tachometer is red-lined at 6500rpm, which, combined with the new, higher gearbox ratios, enables nicely spaced maximum speeds in each gear (see table). Plug fouling can cause a fleeting misfire at high speeds after prolonged gentle driving, but this is self-correcting, as is a tendency to stumble when asked to slog from low speed after a brief stop.

As a town car, the Audi idles evenly, and our car never stalled—even after a quick cold start. (VW-Audi's automatic choke warm-up problems are now behind it, it seems.) A blue telltale lamp glows until the coolant temperature has reached the point where it is safe to work the engine hard.

Our test car's gear change started to misbehave after a while, the reverse gear guard failing (not for the first time, in our experience) to prevent embarrassing graunches. When it's functioning properly, it's a pleasing and precise shift, with only mild synchromesh obstructiveness, and it's matched by an easy clutch action.

The suppression of engine boom at all legal cruising speeds is a major improvement.

It was the original Audi 80 that

first used the special steering geometry that prevents sideways slewing on a patch of ice or after a puncture. Unfortunately, it also produced a woolly, remote-control feeling through the steering wheel that was better suppressed in subsequent VWs (especially the Golf). The new Audi 80's steering certainly transmits reliable information about the front wheels' grip in rainy weather, and its response to minor corrections from a straight-ahead course is now less vague.

Roadholding in fast cornering is excellent on the GLS version's 70-Series radials. Our Audi zoomed round bends with a lack of roll and a degree of poise that defied its front-end weight bias; it makes few demands and covers almost any driver error.

Audi's 'we know best' approach is also apparent on the fascia, where information about water temperature, charge rate and oil pressure is limited to warning lamps in a neat-but-sparse display. The sound of the cooling fan switching on, which it does regularly in traffic, is the only other clue to the engine's wellbeing. Instead, the Audi driver is confronted by an 'economometer'—an uncalibrated vacuum gauge that merely serves to confuse: when you're doing well its needle drops towards the floor, yet the fuel gauge needle alongside works in the opposite direction.

The accurate tachometer dial

HOW GOOD

At-a-glance

DRIVE's verdict on the Audi 80GLS, taking into consideration its rivals, its price and what kind of car it's *meant* to be

Out of 10

PERFORMANCE

●●●●●●●●

FUEL ECONOMY

●●●●●●●●●●

HANDLING/STEERING

●●●●●●

COMFORT/REFINEMENT

●●●●●●

INTERIOR SPACE

●●●●●●●●

PASSENGER AIDS

●●●●●

DRIVER AIDS

●●●●

ACCIDENT/INJURY SAFEGUARDS

●●●●●●●●

RUST RESISTANCE

●●●●●●●●●●

RUNNING RELIABILITY

●●●●●●●●

also contains a small clock that is illegible to all except the driver, and the unhelpfully marked speedometer was inexcusably optimistic on our test car, reading 77½mph at a true 70mph.

Chunky rocker switches that form two edges of the instrument cowl are within fingertip reach of the steering wheel, but they too have their problems: it requires great care to manage one click for sidelights instead of two for headlamps, for example; and drivers have to remember to switch the heated rear window off as no telltale is provided. The horn, operated by the steering wheel spokes, emits a pitiful moan that ill-befits this social climber. All other driving functions are controlled from two convenient column-mounted stalks.

If there are diminutive drivers in your family, you should specify the optional-extra seat-height adjustment, which ought to be standard, as the 80's driving position is worryingly low. With this big problem resolved, the seat's legroom, range and support is excellent, with a firmness that proves welcome on longer drives. The accelerator is a shade heavy, but pedals are well placed.

Powerful halogen headlamps could cause problems for oncoming traffic as there's no easy provision for retrimming. The wipers make no mistakes, however, and powerful water jets can clean the headlamps when the screen washers are operated—a standard GLS feature.

How comfortable

Rear-seat room and comfort have benefited tremendously from the increased dimensions of the new 80. Both rear leg- and kneeroom are 2–3in better than in the Passat, and the seat's shaping and support is now respectable, even compared to 2litre saloons of this price. The only immediate shortcomings are the absence of a centre armrest, a rear interior lamp (though there are rear-door courtesy switches for the solitary front lamp), and separate rear-footwell heating.

Our more-critical rear passengers noticed some exhaust noise, but always the dominant sound is from the road. Perhaps because it is so much quieter in other respects, the new Audi's road-roar and thumping over ridges are all the more audible. Its ride is certainly better than before, but it feels nowhere near as level and unruffled as some better £5000-plus saloons. There is a marked deterioration with a full load aboard, too, with more tyre thumping, a lot of unsettling heaving and lurching over humps, and a distinct nod of the bonnet in response to acceleration and deceleration. We'd be less critical if the new 80 were £1000 cheaper.

Though the interior is hardly



AUDI 80GLS

Front engine: 1588cc/4cyl, OHC (belt); one twin-venturi carb; 85bhp at 5600rpm
Front drive: 4 gears; 17.7mph/1000rpm
Suspension: front—ind damper/struts, coil springs, anti-roll bar; rear—torsion beam axle, coil springs, Panhard rod
Steering: rack and pinion, 3¼ turns/33½ft circle; 5J steel wheels, 175/70 SR 13 radials
Brakes: servoed discs front, drums rear

Parts/repairs (inc VAT)
clutch £46.80 (fitting 3.3hr)
exhaust £73.63 (1.1hr)
headlamp unit £33.84 (0.4hr)
front bumper £55.07 (0.8hr)
laminated windscreen £107.52 (0.7hr)
oil filter and points £4.97 (0.6hr)
major service 10,000 miles (2.7hr)

	per year	per mile
Running costs	£786	6.55p
Loss of value	£393	3.28p
Total depreciation	£1289	10.74p
Insurance group	6	

THE RIVALS CLOCK IN

Alfa Romeo Giulietta 1.6

Fiat 132 2 litre

Mazda Montrose 2000GLS

Vauxhall Cavalier 1600GL

Peugeot 504

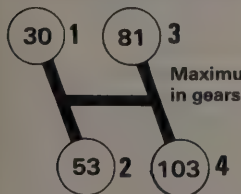
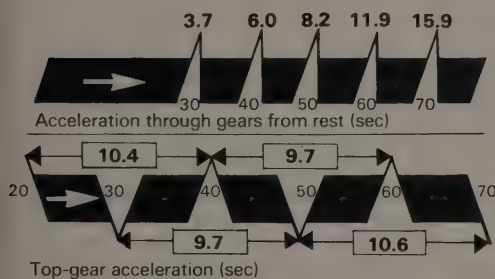
Audible difference

SAVE IT



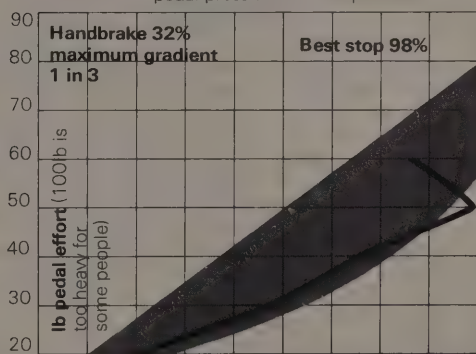
Ian Dawson

PERFORMANCE



max engine speed used 6500rpm;
max in top 5800rpm;
standing $\frac{1}{4}$ mile 18.8sec

BRAKES—pedal pressures and responses



Fade test pedal pressure needed for 75% stop (ideal car would show no variation)
38lb at start, **42lb** in constant use, **80lb** in severe use
Watersplash 60lb at first, **4** stops to recover

FUEL 2-star/91 octane min
overall consumption 34 $\frac{1}{2}$ mpg
effective tank range 450 miles/13gal

Normal range of consumption

hard driving, heavy traffic	27mpg
short journey, suburban	28 $\frac{1}{2}$ mpg
motorway—70mph cruising	33 $\frac{1}{2}$ mpg
mixed roads—brisk, 50mph cruising	35 $\frac{1}{2}$ mpg
quiet rural—40mph cruising	41 $\frac{1}{2}$ mpg

Consumption at steady speeds

30mph	58 $\frac{1}{2}$ mpg
56mph	40 $\frac{1}{2}$ mpg
70mph	33 $\frac{1}{2}$ mpg
100mph	20mpg

SAFETY CHECKS

steering: energy absorbing?	Yes	hazard warning: fitted?	Yes
front seats: secure mounts?	Yes	interior: well padded?	No
head restraint?	Yes	w/screen: laminated?	Yes
front belts: effective?	Yes	doors: crashproof?	Yes
convenient?	Yes	childproof?	Yes
rear belts: fitted?	No	petrol: spillproof?	Yes
		brakes: failsafe?	Yes
		load sensitive?	No

ON-ROAD PRICE (£)	CAPACITY (CC)	FUEL OVERALL (MPG)	MAXIMUM SPEED (MPH)	0-60MPH (SEC)	30-50MPH IN TOP (SEC)	BEST STOP (% g/lb)	OVERALL LENGTH (FT/IN)	MAXIMUM LEGROOM FRONT (IN)	TYPICAL LEGROOM REAR (IN)	STEERING TURNS/ CIRCLE (FT)
4895	1570	29 $\frac{1}{2}$	104	12.2	11.9	100+/40	13' 9 $\frac{1}{2}$ "	41 $\frac{1}{2}$	41 $\frac{1}{2}$	3 $\frac{1}{2}$ /36 $\frac{1}{2}$
5893	1995	29 $\frac{1}{2}$	105	10.7	9.2 (4th)	100/65	14' 5"	39 $\frac{1}{2}$	40	3/35 $\frac{1}{2}$ (P)
4840	1970	29 $\frac{1}{2}$	101	11.8	8.3 (4th)	93/45	14' 1"	40 $\frac{1}{2}$	39 $\frac{1}{2}$	5/31 $\frac{1}{2}$
4421	1584	29 $\frac{1}{2}$	96	12.6	11.3	97/50	14' 7"	40 $\frac{1}{2}$	37 $\frac{1}{2}$	4 $\frac{1}{2}$ /32
4775	1796	28	94	14.6	10.3	98/70	14' 9"	41 $\frac{1}{2}$	39	4 $\frac{1}{2}$ /33 $\frac{1}{2}$

4th—4th gear

P—power steering

lavish at the price, what is fitted is undoubtedly of good quality. Carpeting and seat trim are of the same high quality as in the 100 range, and, despite Audi's liking for pastel shades that too easily show stains, the sheer quality helps spring cleaning. There's a plethora of undisguised plastic, too, which is at least easy to clean—if rather clinical.

The heater provides a good flow of warmth up-front with reasonable temperature variations, despite the retention of a relatively crude (and cheap) water-valve control. The outboard pair of fascia vents also deliver warm air, while the inboard duo offer cold air, and the only volume adjustment for them all is fan boosting. It's a capable system, but no more than adequate at the price.

Normally light and undemanding on the move, the steering can become unwieldy when parking—not helped by the too-prominent steering wheel and its absence of adjustments for reach and rake. Rear-quarter vision is ample (best appreciated when emerging from an acutely angled side road), and the special lip on the rear window's seal keeps rain off the glass en route.

As is becoming increasingly common, the Audi's boot length is not generous, as the fuel tank sits vertically between luggage and rear seat for rear-end crash safety. The 80's styling compensates with a generous load height, so one tends to stack suitcases on their sides. Rear side lamps also illuminate the boot's plastic-lined depths. The high load sill and the spare wheel's intrusion on load width combine to make luggage space only just sufficient for a family holiday. Inside, oddments room is reasonable, with door bins, a locking glovebox, centre console tray and a usable rear window shelf.

How strong

Like VW's, the new Audi 80's doors have to be shut with a hefty slam because the door sealing is almost too good. In other respects, too, things seem to go only from good to better. While the present generation of VW-

Audis has won our praise for conscientious rust protection and paint finish, the new 80 sets even higher standards. Our car's metallic paint was impeccably finished, as befits Audi's up-market aspirations. In addition to a thoroughly applied layer of flexible pvc underneath, the sills get a chip-resistant treatment, the door seams are sealed with plastic strip to eradicate rust 'bleeding', and the steel-core bumpers are plastic-coated to withstand weather and low-speed nudges. Finally, the test car's box sections boasted a thorough internal coating of wax spray, applied by lance through grommets holes.

VW-Audi backs its quality control with a six-year anti-rust warranty. Owners pay only a nominal sum to have the car body checked periodically, so this indemnity seems worthwhile.

How safe

Having hurtled round the test track with calculated clumsiness, DRIVE's testers emerged unscathed to vouch for this Audi's stability and fail-safe handling. Clever engineering means that the 80 does not feel hard work to control in fast cornering, and, when it finally starts running wide of its course (into understeer), easing-off the accelerator is all that's needed to pull it back into line. The brakes feel fine, too, except under extreme duress, when fade sets in to a noticeable—if tolerable—degree. They also take their time to recover from a soaking.

Our safety check-list shows a good tally of 'ayes', our most serious dissent being with the interior's padding—unprotected roof areas behind the visors, for example. Full marks are given to the front seatbelts, with reels concealed in the centre pillars and buckles that move with the front seats to make them feel an integral part of the car—and convenient, too. Outside, all lamps can be seen from the side and are ribbed, Mercedes-style, to stay clean in bad weather. Even the boot's elegant latch is recessed.

How much

Fuel shortages during this test

gave our drivers reason to bless the Audi's 16gal tank, which offers a phenomenally good range.

After recent experience of the identically powered (if higher geared) VW Passat GLS, we were expecting something special of the 80's mpg—and we weren't disappointed, as our table reveals.

Routine maintenance occurs at 5000-mile intervals, and at 10,000 miles for major services, when the 2½hr labour time quoted should cover all the routine jobs that VW-Audi anticipates. Shorter times are sometimes quoted for the plug-in diagnostic check, but not for the resultant servicing. Parts prices are dear but not prohibitive, and their fitting times are particularly swift—confirming the car's good underbonnet accessibility. All this results in running costs that are very reasonable.

The 80 is a perfectly feasible proposition for the front-garden mechanic, but he'll need some special tools and a meter or two.

The old 80's depreciation has been heavy over the last 2½ years and insurance is fairly costly in Group 6 (some imported 1½litre cars are Group 4). However, this new version could establish better sales and secondhand values.

Verdict

At £5200, the Audi 80GLS seems expensive. It is, after all, only 1600cc of four-door family saloon, with pleasant trimming and no more than the customary amount of equipment and comforts. Beneath its new styling, it is merely a technical revamp of its predecessor, and there's much in common with VW's cheaper Passat estate.

Yet the more we drove it, the more attractive the 80 became. Not particularly adrenalin-stirring, this Audi is lively and likeable enough, with very stable and civilised road manners. Rather than aiming for the ultimate in dynamic behaviour, VW/Audi appears to have built the 80 for conservation. Whether that is measured in terms of driver confidence, rust resistance or miles per tankful, there are few saloons of similar size that can match this Audi's aura. Who was it who said that, in the end, only expensive things prove cheap?



For the men in our panel of amateur testers, the Audi 80GLS meant love at first sight. Only 25-year-old housewife Claire Parker had doubts...

'When I started it up, I couldn't hear the engine at all,' said Claire, 'and its idle was so vibration-free that once, at a junction, I thought I'd stalled. Even at 70mph, I could talk without raising my voice.'

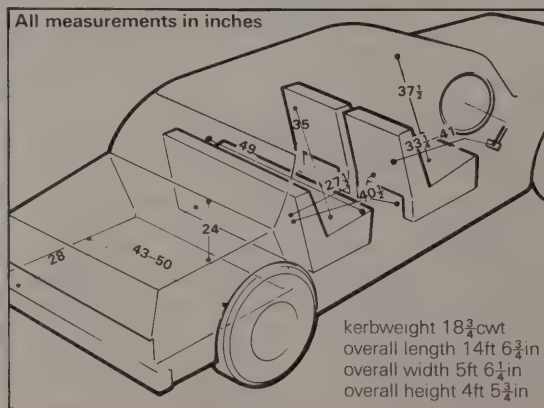
'I was staggered at the car's turn of speed just by flooring the accelerator. Roadholding was good, too, but I don't like the steering—understeer, do you call it? You turn the wheel and nothing happens. In all, it's a smart, well-finished saloon that goes faster than it looks. Just right for a family man in his forties, perhaps, but definitely not for me.'

Building consultant Fred Pocock cheerfully admitted to being 50 and an Audi 80 fan. 'It's a marvellous motor. I had great difficulty finding any fault. It's smooth and noiseless—definitely roomier and quieter than the old 80. But I can't confirm VW/Audi's claim about "6in-thick brick wall" soundproofing—in this country, there's no such thing as a 6in brick wall!'

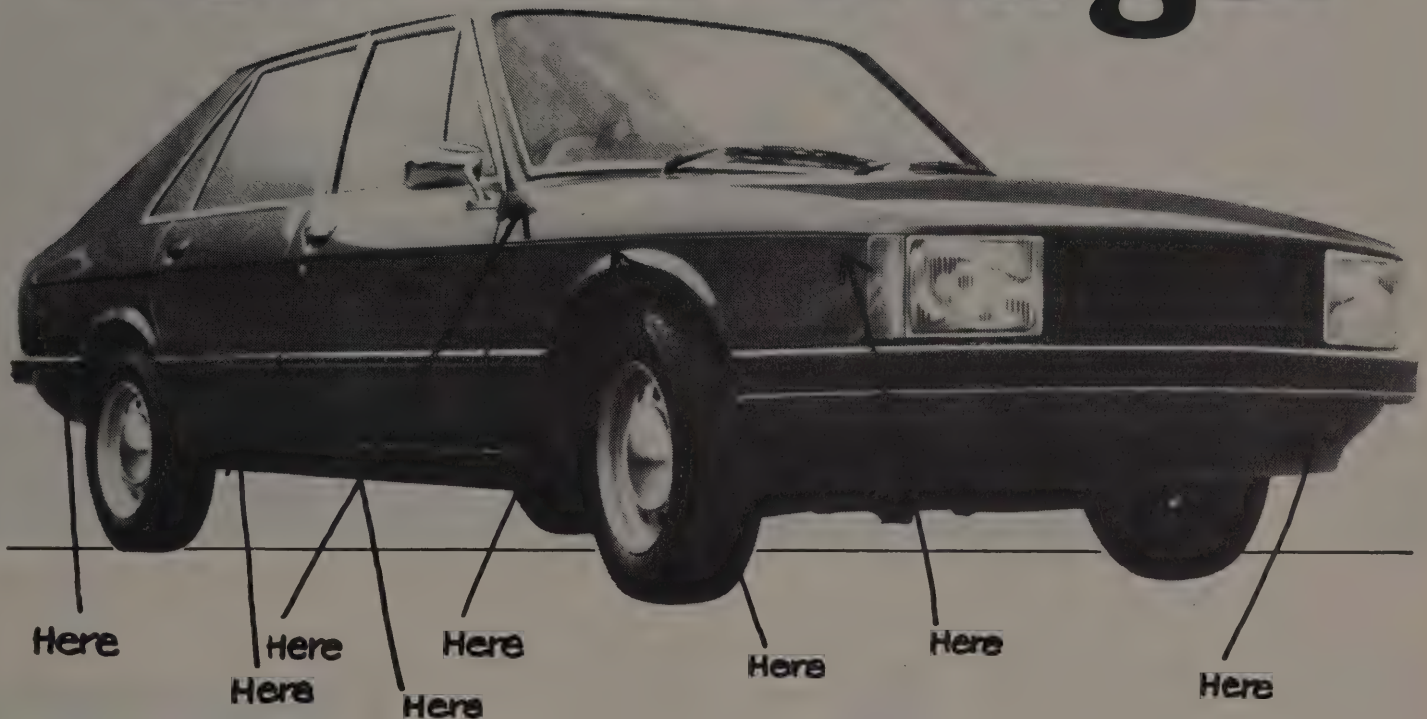
'I can't agree with Claire: the steering felt as if a giant hand was picking up the Audi and turning it for you. I would be happy saving the extra cash for this Audi rather than settling for a cheaper rival.'

Ron Daly, 32-year-old, married air-traffic controller, grinned at Claire: 'I've got past the boy-racer stage,' he said. 'The new Audi's got performance with style and grace—and it's sumptuous. At 70mph, you can hear yourself think, and there's still plenty of power in reserve, as the second choke comes in like an automatic's kickdown—very useful. But I did feel as if I were sitting too low down. I recognised a lot of VW Golf bits under the bonnet, so I'd be happy to do some DIY work on the Audi. Yes, a good salesman could get me to buy it!'

DRIVE car-tester Peter Denayer comments: 'Well, Claire, when you really get "understeer" a lot happens! The 80's driving seat height was a problem for me, too. I think the optional-extra height setting should help.'



We know exactly the places your new car will go.



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Like the doors.
The sills.

And the wings.

As long as you ignore it, it will travel further afield to other spots. Some are very dangerous, like the suspension mountings or the brake pipes.

You really must act the moment you order your car, or at the latest within three months of receiving the keys.

Of course, there are quite a few rust proofing companies to choose from. But

can they match Bodyshield? All we ask you to do is ask your garage a few simple questions.

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Then ask if you can inspect the work afterwards with a fibre optic probe, like the ones surgeons use to examine the human body. (We encourage you to do just this.)

Also, ask if the company automatically sends out reminders for you to bring the car in for regular inspections. (We do. With those that don't, your guarantee could be null and void within a year.)

* And whilst on the subject of

guarantees, ask your garage which company issues an unlimited mileage guarantee, transferable any number of times. (We do, because we believe it's the best deal we can give you.)

And finally, if you still can't decide ask yourself, would a company like Castrol put their name to a product that wasn't No. 1?

After this question-and-answer session, we're sure you'll come to one conclusion - to order Bodyshield.

That way, at least you know on the day you drive your car away, there are certain places where it will never go.

* Ask to see our guarantee



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For a brochure and a list of centres, or if you'd like a Bodyshield franchise, write to us at Bodyshield, Crown House, Unit 7, Ashville Trading Estate, Nuffield Way, Abingdon, Oxon.

Datsun New Sunny 1200GLS

Price £3363 On the road £3398

'Son of DAT' was the quaint name adopted in the 1930s by Japanese financiers for their brainchild—an assembly plant for Austin 7s. Now, Dat Son has grown up into the Oriental giant Datsun, whose best-selling model is the Sunny, currently in its fourth reincarnation.

British motorists, it seems, love a tried and trusted foreigner, for more than 35,000 Sunnys brought a gleam to buyers' eyes in 1977 alone, making it our most popular 'true' import. And they don't come more conservative than this Japanese, for even today's New Sunny is as traditional as a geisha: under its fresh cladding there's the same power unit, and its 'new' rear axle merely imitates the Vauxhall Vivas and Hillman Avengers of 10 years ago.

Has this latest son of Sunny really got what it takes to inherit Datsun's place in the family-car league table?

How it goes

Each new Datsun model seems bigger than the one it replaces, yet the engines are unchanged. While the New Sunny looks bigger than it really is, the 4-door saloon that DRIVE tested weighs almost 1cwt more, and the same modestly-powered 1171cc engine has to cope with higher overall gearing, too.

If you can manage to yank the choke right out, the Sunny starts instantly from cold. Our car's warm-up period revealed some accelerator raggedness on part throttle, which we lessened by leaving the air cleaner's intake flap on its 'winter' setting in all but very warm conditions.

Despite the advantages of a well-run-in engine, perfect tuning and good test weather, our sample couldn't overcome its weight and gearing handicaps. It's test track performance was frankly disappointing, and the Sunny 1200 GLS is now one of the slowest in its class, both in and through the gears—top-gear acceleration being the most impaired. A motorway gradient demands a heavy foot to sustain 65mph, and full throttle plus frequent gear changes are needed to keep up with a random cross-section of traffic.

The sunnier side of such gutless behaviour, detailed in the table opposite, is seen in the Datsun's fuel economy; but the Renault 14 and Datsun's domestic rival, the Mazda 323, are both cheap to fuel and livelier to drive.

Fortunately, the hard-worked gear shift remains a delight, flicking its way around the gate with fingertip ease. The clutch is effortless, too, though some testers wished for more 'feel' at

the point of engagement. On the test track, our brutal standing-starts revealed some clutch slip, and our car could not get under way on a 1-in-3 hill (even a 1-in-4 can be a struggle when the car is laden).

Credit points? Well, the Sunny's driving position and controls have a lot of appeal. Better legroom, a clearer outlook and more seat support for the spine mean that longer trips can be made without fatigue, and, apart from one or two details, all pedals and switches work with precision.

The blank face of a dial reserved for the coupé's tachometer is irritating, and telltale lamps are scattered unnecessarily when there's a largely unoccupied area for their grouping on the right of the fascia. Headlamps work well despite a lack of instant adjustment. The sensible wipers have an intermittent setting as well as a brief wash-wipe at a flick of the stalk—good features at the price.

The speedometer is tolerably accurate (2½mph fast by 70mph), and a clock and temperature and fuel gauges are provided, as well as a trip mileage-recorder and a choke-warning lamp. (This last is essential, as the choke's pull-out knob is nasty to grasp—a nail-breaking trial for our lady drivers.) Both mirrors do their job well, the inside one dipping at night without losing adjustment.

New though the rear suspension

HOW GOOD

At-a-glance

DRIVE's verdict on the Datsun New Sunny 1200GLS, taking into consideration its rivals, its price and what kind of car it's *meant* to be

Out of 10

PERFORMANCE

●●

FUEL ECONOMY

●●●●●●●●

HANDLING/STEERING

●●●●

COMFORT/REFINEMENT

●●●●●

INTERIOR/BOOT SPACE

●●

PASSENGER AIDS

●●●●

DRIVER AIDS

●●●●●●●●

ACCIDENT/INJURY SAFEGUARDS

●●●●●

RUST RESISTANCE

●●●●●●

RELIABILITY/EASE OF REPAIR

●●●●●●●●

may be, it does no more than steady the Sunny through the sort of bumpy bends that would throw its predecessor into such a dither. Cornering is grippy and willing, despite the 'old fashioned' recirculating-ball steering's lack of information about the tyres' hold during brisk cornering. The Sunny still feels sloppy and vague when pointed straight ahead, and light suspension damping that allows it to heave over undulating roads adds to the car's directional imprecision.

All this makes the New Sunny feel less of a fun machine than such rivals as Volkswagen's Derby or Vauxhall's Chevette. There's no question about its stability, though, for the Sunny shines with safety even at the limits of its roadholding.

How comfortable

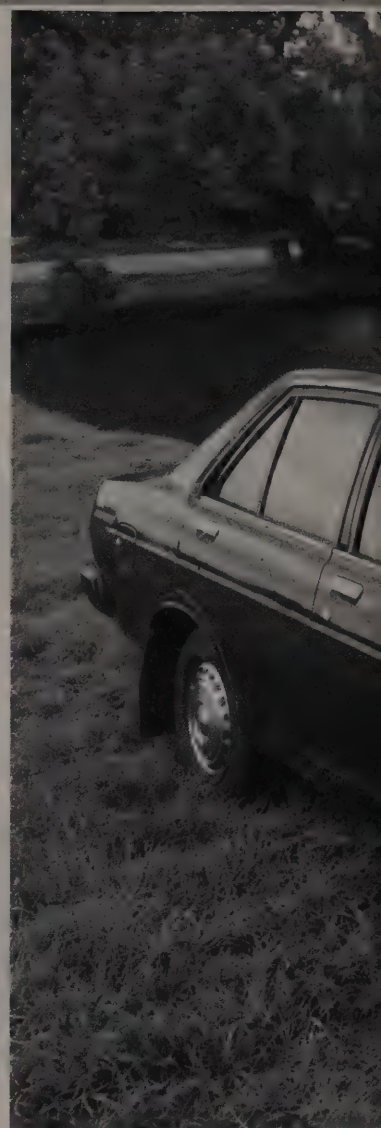
Suspension changes have achieved little in this department. There's still a heavy, unsprung live axle under the Sunny's rear that tends to buck the bodywork while travelling over indifferent road surfaces. When the going gets *really* rough, however, the ride redeems itself. The body doesn't crash and creak, and road-roar from cobbles and coarse asphalt is muted, too. Generally, though, the car's ride remains . . . well, undistinguished.

Where the New Sunny does excel is in its smooth operation and noise suppression. Its virtually inaudible 600rpm tickover must win a few sales by itself, and cruising at any speed up to 60mph is a relaxing, noiseless experience. The high gearing makes 25mph a minimum speed in top gear, yet the model remains a good example of how easy controls can help to make town driving smooth. Deeper windows assist parking, too, and the low-geared steering offers tight turning circles for only average effort.

Our passengers tended to compete for the front seat. In contrast to its spaciousness, warmth and comfort, those behind get short measure, sitting with knees pressed against the front-seat backs (unless adjusted well forward) and suffering limited headroom. The rear-legroom figures on our diagram are poor even by small-car standards, and the rivals table shows just how much roomier some of them are.

We rate the back seat as suitable for pre-teens only—except that there are no childproof latches to stop them falling out of this four-door saloon. Parents are warned of insecure front doors only—when the rooflamp flashes.

Heating is not apparent in the rear footwells, but good warmth surrounds front occupants' toes. The single, all-purpose airflow direction control is confusing and tempts drivers to look low down



DATSUN NEW SUNNY 1200GLS

Front engine: 1171cc/4cyl, OHV (chain); one twin-venturi carb; 52bhp at 5600rpm
Rear drive: 4 gears; 16.8mph/1000rpm
Suspension: front—ind damper/struts, coil springs, anti-roll bar; rear—live axle, coil springs, four links
Steering: recirculating ball, 4½ turns/29¼ft circle; 4½J wheels, 155SR 13 radials
Brakes: servoed discs front, drums rear

Parts/repairs (inc VAT)
clutch £44.60 (fitting 2.4hr)
exhaust £27.89 (0.7hr)
headlamp unit £11.79 (0.4hr)
front bumper £38.70 (0.4hr)
laminated windscreen £41.92 (1.8hr)

oil filter and points £4.82 (0.3hr)
major service 6000 miles (2¼hr average)

	per year	per mile
Running costs	£654	5.45p
Loss of value	£85	0.70p
Total depreciation	£654	5.45p
Insurance group	3/4	

THE RIVALS CLOCK IN

VW Derby LS1100
Austin Allegro 1300S
Mazda 1300 hatchback
Renault 14TL
Lada 1300ES

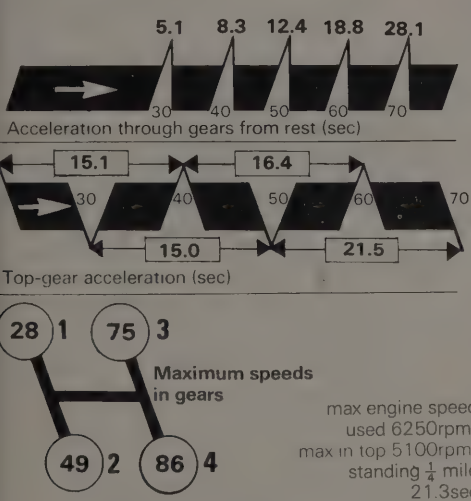


Ian Dawson

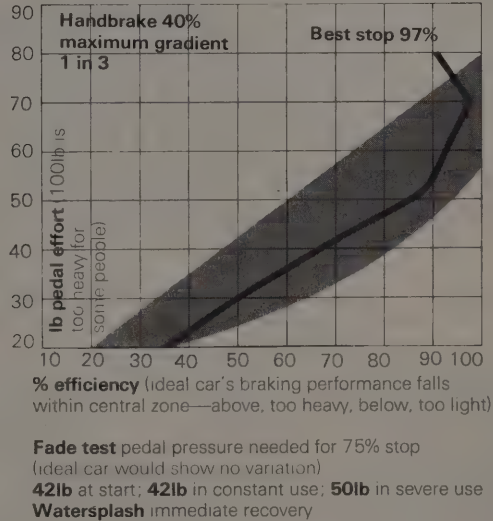
Rising Sunny

SAVE 1/2

PERFORMANCE



BRAKES — pedal pressures and responses



FUEL 2-star/88 octane min overall consumption 37mpg effective tank range 350 miles/9 1/2 gal

Normal range of consumption	
hard driving, heavy traffic	29 1/2 mpg
short journey, suburban	30 1/2 mpg
motorway—70mph cruising	32 1/2 mpg
mixed roads—brisk, 50mph cruising	36 1/2 mpg
quiet rural—40mph cruising	46 1/2 mpg
Consumption at steady speeds	
30mph	61 1/2 mpg
56mph	40 1/2 mpg
70mph	32 1/2 mpg
max mph	22 1/2 mpg

SAFETY CHECKS

steering: energy absorbing?	Yes	hazard warning: fitted?	Yes
front seats: secure mounts?	Yes	interior: well padded?	Yes
head restraint?	Yes	w/screen: laminated?	No
front belts: effective?	No	doors: crashproof?	Yes
convenient?	Yes	childproof?	No
rear belts: fitted?	No	petrol: spillproof?	No
		brakes: failsafe?	Yes
		load sensitive?	No

ON-ROAD PRICE (£)	CAPACITY (CC)	FUEL OVERALL (MPG)	MAXIMUM SPEED (MPH)	0-60MPH (SEC)	30-50MPH IN TOP (SEC)	BEST STOP (% g/lb)	OVERALL LENGTH (FT/IN)	MAXIMUM LEGROOM FRONT (IN)	TYPICAL LEGROOM REAR (IN)	STEERING TURNS/ CIRCLE (FT)
3480	1093	38	87	15.2	10.9	95/80	12' 8"	40 1/2	36 1/2	3 1/2/30 1/2
3530	1275	37	85	19.0	12.9	90/55	12' 7 1/2"	40	40 1/2	3 1/2/34
3616	1272	36 1/2	89	15.9	11.8	100/40	13' 0"	39 1/2	37 1/2	4 1/2/29 1/2
3599	1218	36 1/2	89	14.8	11.3	90/70	13' 2"	41	38	4/32 1/2
2691	1294	28	87	17.4	13.2	96/70	13' 4"	39	38	3/36

while trying to reset it. Another fault is that its screen-demist setting still allows cold air to dribble out at floor-level. The four facia vents have generous output (the outer pair blowing at the heater's temperature), but there is no way of adjusting their volume other than using the quiet, three-speed booster fan.

How tough

Our testers noticed that the Sunny's wide frame quivered when its doors were shut enthusiastically; the wings, too, reveal remarkable flimsiness when pressed. But there's no denying the quality of fit and finish that Datsun achieves in spite of its high production figures.

Underneath, our experts approved of the suspension's life-preserving grease points, and there's a neat layout of routine service items that should encourage any aspiring home mechanic. In some respects, in fact, the Sunny's simplicity verges on the primitive—there is no coolant expansion tank, for example, and the cooling fan has a fixed-pulley drive.

In almost a year's service, our test car had suffered a few paint chips, from which rust was hungrily foraging. But the bumpers' chrome-plating looked better than on some Japanese cars, and Datsun is showing more determination to prevent rust getting a hold underneath.

Door seams are now sealed with pvc strips and the front wheel-arches have plastic liners to stop mud collecting. A bituminous compound is used to rustproof the floorpan—not entirely satisfactory because its application is inadequate in such obscure corners as the wheelarch lips and upper edges of the fuel tank.

Generally, more needs to be done if Datsun wants its reputation for longevity to spread to the New Sunny's body. Currently, the robust engine seems likely to outlast the bodywork.

How safe

Weak Sunny power means that it is almost impossible to accelerate the tail into a slide, even in the

wet, and prospective owners can rest assured that we circled a test-track steering pad, the size of a large roundabout, flat-out in third at a steady-but-stable 35mph.

Datsun's brakes are an object lesson in proper servo-assistance. The pedal feels firm and progressive in ordinary use, and needs a firm, 70lb shove to attain an emergency stop that's not far short of 100% efficiency—just the kind of panic stamp that drivers apply instinctively. There's little fade; the handbrake is extremely powerful; and water seems to have no harmful effects.

It's surprising, however, to find injury-prevention deficiencies in a revamped car. For example, the petrol tank's vulnerability to a rear-end shunt is more than most manufacturers would tolerate today, and the absence of child-proof latches on the rear doors is even more startling.

It's good to see careful roof padding behind the sunvisors, but the windscreen should be laminated as well as tinted; this can be fitted as a replacement, but not as a factory option.

How much

Datsun virtually invented the concept of the modest family saloon with all 'extras' as standard, so it comes as a surprise to be asked an extra £48.59 for the New Sunny's push-button radio—which works extremely well and is in fact worth having at this modest price. Apart from the omissions mentioned earlier, the model still offers a good tally of features such as tinted glass, front head-restraints and reversing lamps, the single standard of trim apparently keeping it all down to an extremely competitive price.

Value doesn't end there, either, for Datsun spares prices seem more modest than those of most imports. As some insurers' Group 4 rating seems unrealistic, Datsun itself and some other companies can arrange more-reasonable terms. Depreciation on the earlier Sunny has been very low—it's a car with keen secondhand fans.

Maintenance is made rather more arduous than usual in a modern car by conservative

Japanese engineers, but it's not beyond the DIY man to use a grease gun and change transmission oil. Underbonnet accessibility is first-class, with straightforward valve adjustment and easy carburettor and distributor maintenance. A small roll of tools clips securely with the convenient jack and wheelchocks on to one side of the boot—so much better than having them rattling about.

Those who aren't forecourt 'regulars' or 'account customers' will appreciate the Sunny's ability to run on any grade of petrol that's available in Britain, and, although its consumption is not as frugal as the 39mpg we achieved on the original Sunny, six years ago, it's still good enough to rank among the best in its class. However, it must be acknowledged that there are roomier super-minis with 1000cc engines that are just as quick and more frugal than this 1200.

Oil consumption is slight—one pint added between 6000-mile services will be enough.

Verdict

The reasons for the New Sunny's shining success are almost as inscrutable to DRIVE as our European motoring needs are to many of Japan's car makers.

Certainly, the New Sunny is a better-proportioned car—handsome, even—but still it lacks the room and the comfort to suit full-sized Western families. Instead, the Sunny's new bulk poses a problem for Datsun UK, as this heftier model really needs more power—which could spoil the nicely-stepped range of engine sizes in the rest of the Datsun catalogue. (The 1400cc unit used in the New Sunny auto and coupé would improve this saloon's performance at no great petrol cost.)

So what is it that keeps this Easterner at the top of the importers' pops? DRIVE can only assume that its blend of mechanical refinement, reliability and reasonable looks are priced just right for Mr Average's pocket. And, when the Sunny is bathed in the light of the Rising Sun's sales machine, its shortcomings naturally fade quietly away...



More Sunnys are sold in Britain than any other imported car, so our professional testers were keen to hear just what it has that appeals to buyers.

London builder Fred Pocock was completely sold: 'I couldn't find much to complain about. The steering wheel could have had a nicer feel, and I kept pressing the horn buttons accidentally. The acceleration was poor—in fact, there didn't seem to be any power at all, but at least it made for a quiet engine.'

'I'd have difficulty choosing between it and a Ford Escort, but I thought the Datsun was smoother and more comfortable. There was a time when I'd have bought a car like this—despite its performance.'

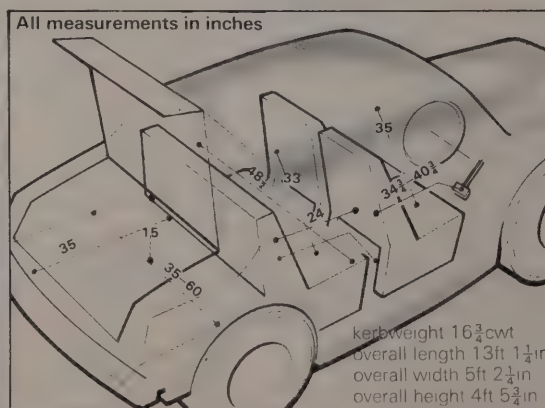
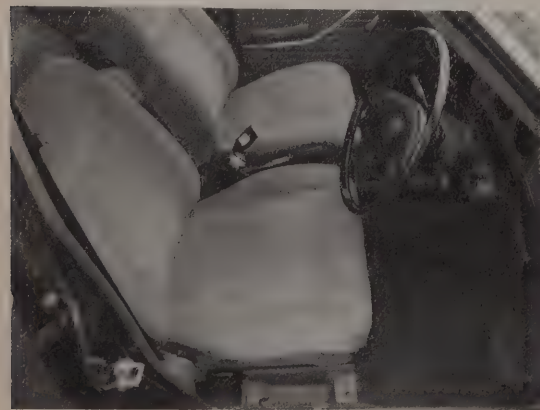
'I thought the engine was only a 1000cc,' said airways man Ron Daly. 'It really needs a 1300 or 1400cc engine—that's its big failing. But it was lovely and quiet, and at 70mph you could hold a normal conversation.'

'After my VW Golf, the clutch seemed too light, but I got used to it. The gear change is nothing special, but I thought the ride was good—less bouncy than my Golf. For this sort of money, I'd also look at a Renault 14, especially as the whole car appeared frail to me; but I must admit that I could get to like the Sunny.'

Housewife Claire Parker was unimpressed—'a dull car. I noticed how quiet the engine was—you could hardly hear it ticking over—but, there again, it was sluggish. The car cornered well, but then it *couldn't* go fast enough to get into trouble. I thought the gearbox was nice, and the whole car was an undemanding drive... but I didn't like its looks. It was too Japanese, with all those lumpy shapes and the stick-on-bits.'

I suppose the Sunny would suit Joe Bloggs if he wants a cheap car to go from A to B economically, but it's too small and underpowered for me.'

DRIVE car-tester Peter Denayer replies: 'Generally, familiarity seemed to breed coolness—if not contempt. The ride quality of Ron's Golf may be forgiven for being bouncy at 86,000 miles—he tells me that it's still running on the original dampers!'





A SLEEPY north Somerset town that many people may never have heard of has, with DRIVE's help and initiative, set an example that, copied by every motorist in Britain, could slash the nation's petrol consumption by 200 million gallons a year.

Now, after showing the remarkable savings that can be made by doing little more than cultivating a light right foot, drivers in the Bristol Channel port of Watchet are challenging motorists throughout the country to follow in their tyre tracks and, every time there's temptation to clog it, to remember the name of their little town and . . . *Watch It!*

A coach driver, lorry driver, ambulance driver, police driver, delivery driver, sales rep, commuter, housewife, cabbie, driving instructor, garage owner, shop proprietor, district nurse, school-teacher . . . in June, DRIVE challenged 19 Watchet drivers to show what they could do in their own, familiar cars.

They responded by chalking up, between them, an average fuel



Watchet driver Roland Fielding: 'We've all got to save fuel'

saving of 8%—more than the 5% cutback demanded by Energy Minister David Howell. A result that, achieved nationwide, could trim Britain's annual oil-import bill by £140 million . . . give the OPEC nations a clear indication that their dire warnings are being heeded . . . and, based on the Watchet drivers' annual mileage and pre-economy-run mpg figures, represent a £20-a-year saving on the average motorist's petrol bill.

That's just for starters. For, if the people of Watchet carry on as they've begun—and there's no doubt that practice and experience of economy-driving can earn even greater economies—a £30 annual fuel-saving is possible.

The test

There were no gimmicks, no DRIVE briefings, no teach-ins at Watchet. The cars were not pre-tuned; tyre pressures were not corrected. It was essential that each motorist's first run over a measured, specially chosen 15-mile course, from Watchet to Dunster and back on the A39, reflected a typical drive for our Save It guinea-pigs. To ensure this, each was told that he or she was taking part in a survey aimed at determining the 'standards of road-maintenance' in the area. The only unusual element: drivers were to be unaccompanied, except for weights (representing a passenger) placed on the car floor.

On arrival, each candidate's vehicle was taken away by an AA technical services engineer to have a Transflo fuel meter fitted. Further to conceal the real intention of the DRIVE exercise, each instrument carried a label bearing the legend 'Schokmeter'. Only when each driver had completed his or her initial run was the truth revealed.

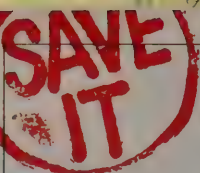
But if they then thought that they were to be given expert advice on economy-driving, they were disappointed. They were told by DRIVE simply to produce their own interpretation of 'an economical drive', observing all speed limits—and not being a slow-moving nuisance to other road-users.

The weights were removed, and this time, on a second run, the performance of each participant was scrutinised by an AA travelling observer. Finally, a third run was completed with an AA expert driving, to show the kind of super-economy that can be achieved with skill and practice.

The results

Even our expert had to bow to the expertise of 32-year-old long-distance coach driver Ray Waterman, of Woodland Rd, Watchet. Driving his ageing Austin A60, he was the only owner narrowly to beat the AA man at his own mpg game.

Ray made a 17% petrol saving. True, the 15-mile journey took him seven minutes longer than usual as he strove for economy; but, as our observer's report notes, Ray at all times accelerated gently through the gears, and engaged top as



1st

Ray Waterman

Could it have been the influence of the budgerigars he breeds as a hobby? Certainly Ray Waterman's feather-light touch on the accelerator earned the 32-year-old coach driver the Mr Save It title in the DRIVE 'economy run' at Watchet—and a cheque for £100 to go with it.

Quite by chance, a few days earlier, Ray had fitted a reconditioned engine into the 1963 Austin A60 that he has owned for 9½ years. Even so, his 39.45mpg return—a 7mpg improvement on his first run round the 15-mile Watchet test circuit—was an excellent result considering the car's age. Not even our AA expert mpg-saver could match that.



2nd

Denise Bushen



A former secretary-temp and youth club leader, mother-of-three Denise Bushen has worked as a driver for husband Jim ever since he opened a taxi business in Watchet, two years ago. Her job keeps her busy—'a 16-hour day at the wheel, seven days a week, is not uncommon,' says 50,000-mile-a-year Denise.

Such experience obviously stood her in good stead on the mpg run. Her 27.3mpg performance was only fractionally beaten by the AA expert—a result that made her runner-up and won her £50.



3rd

Jessie Norman

Schoolteacher Jessie Norman has taught nine to 13-year-olds at nearby Williton since 1951. Judging by her showing in our run, maybe she should now consider teaching motorists how to stretch their petrol!

A former president of Watchet Women's Institute, an active member of the local Red Cross and a keen churchgoer, Jessie drove her first 15-mile leg as conscientiously as she did the second. She achieved 36.6mpg—a figure that the AA expert was hard-pressed to beat. The result put her in third place, and in line for a £25 cheque.

quickly as possible but without labouring the engine. Twice, when held up by slow-moving traffic, he overtook without flooring the throttle; braking was equally feather-footed; and his road-'reading' and anticipation were always first-class.

Married, with two children, Ray Waterman lists car mechanics among his interests, but even so was stunned by his mpg improvement. He echoed the reaction of practically every participant when he said: 'I'm amazed. I know they preach on the TV about taking things easy, but I never thought it would make this difference.'

Good as Ray's example was, however, it had nothing on ambulance-driver Tom Welch's second run. If he carries on driving as he did during DRIVE's exercise, he stands to cut his petrol bill by a quarter. And, with a combination of high private mileage (15,000 a year) and a thirsty, 13-year-old Rover 2000, that represents a potential annual saving for him of around £150.

The mechanical condition of Tom Welch's Rover was so poor that it was withdrawn from the economy drive for practical reasons. The fuel pump was badly worn, engine timing was wayward, and the carburettor was so far out of adjustment (causing the engine to run very rich, with resultant loss of mpg) that the needle on our exhaust-gas analyser was sent spinning off its scale. Not surprisingly, he gladly accepted the offer to do his economy runs in an AA-owned Ford Fiesta 1.1 Ghia—after some familiarisation.

Though it was a 'strange' car, Tom was sure that it made no difference to his result: 'Let's face it, I should be able to hop in and out of anything when, on top of my private motoring, I cover 35,000 miles a year at the wheel of an ambulance.'

But that, according to the AA observer, is probably his undoing. For, despite his remarkable mpg improvement, 'he obviously missed his blue flashing light and ambulance siren. He accelerated too hard in intermediate gears, and hung around too long in third gear for maximum saving.'

Thirty-eight-year-old Tom took four minutes longer on his second run around the test route, yet was still two minutes faster than the AA expert over the 15 miles. And it showed, for our man bettered Tom Welch's already-good performance by nearly 11%.

Like Tom, other Watchet motorists who drive high mileages in the course of their work—on somebody else's fuel bill!—tended to be harsh on the throttle. This was certainly true of the sales rep in his company-owned Ford Escort; the village bobby, used to driving a patrol vehicle, and with a hobby of racing bangers; and a district nurse, who probably covers as many miles a year as a GP in her Chrysler Avenger. All achieved the Energy Minister's 5%-improvement target—the policeman recording an especially impres-



Two who saved it by more than 5%—lorry driver Colin Northam (above), and farmer Richard Burnell. sive 13% saving in his 15-month-old Colt Lancer 1400—but were handsomely beaten by the AA's man . . . to the tune of 3½mpg in the case of the district nurse, and 8mpg in the others.

Can it be that, to attain maximum mpg savings, a motorist has actually to *lower* his driving standards? One man who thinks so is John Knight, 32, a professional driving instructor in partnership with his wife Pamela. Despite raising his performance by a creditable 8mpg in his year-old Datsun 120Y, John was forced to concede a margin of 6mpg to the AA expert-saver. 'It's not sour grapes,' he said later. 'As it happens, I was pleasantly surprised by my improvement. But I have to say it: in no way, in my view, would I be able to teach my learners to drive like this.'

'Faults' he observed: approaching junctions in fourth gear, and going straight into first on entry; negotiating several bends in top, when dropping a gear would have been desirable.

Other Watchet drivers who achieved a saving of 5% or more were: Richard Burnell, 32, farmer—7½mpg improvement (1974 Ford Escort RS2000); Carole Pilkington, 18, secretarial-college student—6mpg improvement (1976 Ford Popular); Miss Sylvia Talbot Hawkins, 75—5mpg improvement (1975 Mini 1000); Colin Northam, 37, long-distance HGV driver—3½mpg improvement (1971 Austin Maxi); and Mrs Denise Bushen, 35, taxi driver—2mpg improvement (1972 Ford Zephyr).

Three drivers failed to make a 5% saving because, to their credit, they drove so economically on their first run! They were: schoolteacher Mrs Jessie Norman, 56, in a 1972 Hillman Hunter estate;

Driving forces

A car is a necessity in a place like Watchet, especially if you're a shift-worker like ambulance driver Tom Welch or a commuter like Steve Lewis. Shopping and cinema trips, too, can be tricky without one: the nearest major centre is Taunton, 17 miles away. The main snag, according to the locals, is the 'poor', 'inadequate', 'inconvenient' and 'expensive' bus service provided by the Western National company.

There are hopes that an independent railway-preservation society, based at Minehead, will ultimately run trains all the way to Taunton via Watchet; but there's little chance of this happening in the near future—small consolation for the little harbour town's motorists, who, with fuel costs escalating, are certainly concerned about today rather than tomorrow.

Wages are not high in the area, and, the way things are going, it surely won't be long before some will be forced to give up motoring altogether. Four who took part in the DRIVE economy run said that that moment would come once a gallon of petrol (on today's monetary values) reached £1.50; six others declared that they would have to call a halt at £2.

Four felt that it would be impossible to cut back on mileage, but 14 of the 19 said that they would consider switching to a motorcycle or moped if things got really tough . . .

retired sales rep Roland Fielding, 67, in a 1972 Vauxhall Viva; and apprentice electrician Nicholas Humphries, 19, in a 1978 Ford Fiesta.

The remainder—50-year-old grocer Neville Massey, 53-year-old newsagent Donald Tapp, 31-year-old local-authority transport manager Steve Lewis, and 53-year-old housewife Peggy Waterman—achieved 39½, 47, 36 and 43mpg respectively in a 1973 Ford Cortina estate, a two-month-old Renault 18, 1970 Rover 2000 and 1967 Renault 10. The AA expert beat this quartet comfortably by 5%, 8%, 7% and 11%.

When the performances of the 19 Watchet participants are compared against those of the AA expert (a more realistic method of determining the most

economical drivers in the group), interesting patterns emerge. Those employed in occupations with a driving bias, for example, appear to be either very Save It-conscious—or not at all. The coach driver, taxi driver, lorry driver and farmer were in the top five; but the district nurse, driving instructor, ambulance driver, garage owner, sales rep and police officer occupied six of the bottom seven places.

Another feature was the neck-and-neck placing of the two Watchet teenagers, who came sixth and seventh respectively: Carole, who had passed her test four months previously, pipped Nicholas, who had torn up his L-plates in 1977.

The cars

Only a quarter of DRIVE's Watchet drivers had much idea what economical driving really was about . . . an optimistic indication that the majority of Britain's motorists can, in fact, make significant fuel savings without cutting back on mileage. But the picture is less bright when it comes to car maintenance. Though there were only three cases of incorrect tyre pressures, all but six of the vehicles in the Watchet 'economy run' were out of tune, inevitably increasing fuel consumption.

(When 100 cars were checked recently at the AA vehicle-inspection centre at W Bromwich, a similar proportion was found to be running rich.)

With petrol costs taking off, and further price increases and oil shortages forecast, it is clear that we all have our bit to do. But, as a slice of Watchet's motoring population has proved, significant savings can be achieved—painlessly.

From now on, the by-word, in deference to the sterling example of the stalwarts of the Somerset town, surely should be . . . Watch It!

DRIVE exercise directed by associate editor Roy Johnstone, with Myrrhine Raikes, assisted by AA technical services staff Doug Houston, Charles Surridge, Lawrence Pearce and Richard Taylor.

DRIVE acknowledges the assistance of Transflo Sales Engineering, of Teston, Maidstone, Kent, who supplied the fuel-measuring meters used



INSURANCE

Shattering experience

IT ISN'T only the glass that's shattered when a windscreen bursts into fragments for no apparent reason. It's an unnerving experience for the driver, too, particularly if his vision is suddenly obscured on a motorway.

It happens, on average, to 500,000 motorists each year, fortunately without serious consequences in most cases. But how many drivers realise that the screen's replacement could hit their own pockets—despite the terms of their insurance policy?

Motor insurance policies usually include a clause to the effect that a claim for a windscreen or window that breaks other than in a motoring accident will be met without prejudice to the driver's no-claims discount—including the cost of repairing paint scratches caused by flying glass. Some insurers, such as Eagle Star, Guardian Royal Exchange and Cornhill, impose no limit for a claim under this heading; but others, like Norwich Union, restrict payment to £50. There may even still be some which retain the old limit of £25.

This is how some drivers are financially embarrassed when a breakage occurs. A toughened windscreen can usually be replaced for £25, certainly within the £50 limit, but even the latter figure may not be enough for a laminated replacement. It should not be overlooked that the amount paid for your car's optional-extra screen must be added to the cost of its replacement—plus, of course, the labour charge.

If your policy is one of those with no limit, you have nothing to worry about, but if there is a limit, and the replacement cost is above it, you will be faced with the choice of claiming for the full amount and losing your no-claims discount, or of paying the excess yourself.

It is worthwhile asking your car's maker or your dealer for the full price of replacing your windscreen, and then arranging for your insurer to increase the limit in your policy accordingly. Most will do that for a nominal premium—around £3 for up to £75, £5 for £100 and £10 for unlimited cover—and that's far cheaper than losing your no-claims discount. RONALD BEALE

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D59

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D59



HOME MECHANIC

Happy tune

SHORT OF owning your own oil well, careful driving is probably the best single way to keep fuel bills to a minimum. But even the feather-footed driver who reads the road well ahead, avoids hard acceleration and keeps high-speed cruising to a minimum will deny himself valuable miles per gallon if his car is not in first-class running order.

That's because the petrol engine is a naturally wasteful device. For every gallon of petrol it burns, only 20% is used in actually propelling the car; the remainder is lost as heat through the cooling system. In fact, if it would be rejected on grounds of inefficiency! However, for the present, most of us are stuck with it, so it's only commonsense to ensure that the engine makes the most of its fuel by servicing it properly.

Sparkplugs should be checked every 5000-6000 miles and their gaps set to the manufacturer's recommended figure (usually 0.025in). Have them sandblasted clean by a garage if they are choked with oil and/or carbon deposits—and find out why they got that way (worn piston rings, valve guides and their seals are probably allowing oil to be burned in the combustion chambers). Renew the plugs every 10,000-12,000 miles.

While the plugs are out, it's a good idea to check each cylinder's compression with a cheaply purchased gauge. The gradual loss of performance caused by burnt valves, and the extra amount of throttle needed to maintain the car's original acceleration, can pass unnoticed.

Contact-breaker points should be examined at the same time as the plugs. Remove them from the distributor and look at their contact surfaces. If they contain pips and craters, fit a new set. Don't try filing or stoning them flat—you'll never get them parallel. Set-up the new points with the gap specified in your handbook, and check them with a dwell meter, which can take account of any wear in the distributor. Lubricate the cam with a smear of grease, and the top of the spindle (below the rotor arm) with a few drops of engine oil.

Fitting new points invariably

alters the engine's ignition timing, so this is the next fuel-saving job. It can be done either statically, with a test lamp, or more accurately with a strobe light that 'freezes' the timing marks while the engine is running.

Remember that fitting an electronic ignition system won't, in itself, save you petrol. What it will do is ensure that the car's ignition maintains its tune over long periods, so your mpg will not decline with mileage—at least not for that reason. Fully electronic systems—those using no points—can make a 5% fuel saving over a period.

Older carburettors with accessible adjusting screws should be carefully tuned to ensure correct mixture settings and idling speeds, and the float-chamber level should be checked for accuracy. On the newer, 'tamperproof' emission-type carburettors, this work must be left to professionals who have the equipment to tackle the job. And don't be surprised, in this throw-away age, to be told that it's almost as cheap to buy a replacement carb as to have the old one overhauled.

If you've never dared to touch a carb before, then turn to page 23 to discover how easy it can be to do your own fuel-saving tune-up. On a variable-jet carburettor, the only other task is to check that the piston and needle move freely, and to keep the dashpot topped-up with engine oil.

Whether you can adjust the carburettor or not, you can easily ensure that the air filter is clean, renewing the paper cartridge or changing the oil bath as necessary. Also make sure that the air-intake pipe (unless it is the automatic, thermostatically controlled type) is set for the correct seasonal setting—and don't forget a spot of oil on the choke and throttle linkages to keep them working smoothly.

To perform efficiently, an engine must be run at an optimum temperature—usually about 85°F. Below this, it is overcooled and wasting the fuel that does not vaporise properly. If the temperature gauge reads low, or you suspect that the engine's running cool, or it is slow to warm up, the thermostat could be faulty and due for renewal. Thermostats are all of the wax type nowadays and can, though rarely, latch in the open position.

If your engine still runs too cool, the radiator can be blanked off (experiment with a small area at a time) with a piece of hardboard, but this is unwise if no temperature gauge is fitted. It is far better to invest in a thermostatically-controlled electric fan that switches on automatically only when it's required.

BARRY FRANCIS



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DAVE DYMO TAKES A BREAK

AFTER ANOTHER HARD DAY ON THE ROAD





LEGAL

Speak easy

JOE ARNOLD was preoccupied as he drove to work at the bank, peering through the mist and listening with one ear to the ramblings of Terry Wogan. He pulled up gently at a familiar T-junction, applied the handbrake and waited for a gap in the traffic.

But, unfortunately, Arnold was not the only driver paying insufficient attention that morning. Following in his wake was a young man in an ageing Renault 16. And, in the weeks that followed, 19-year-old Peter Cartwright wasn't able to explain to himself how it was that he failed to see Joe Arnold's stationary Rover until it was too late. . . .

Bang. Arnold was jolted wide awake as his car leapt forward. Behind him, Cartwright said

goodbye to his no-claims discount. Both men climbed from their cars prepared for the worst, and Arnold's blood was close to boiling point. Young Peter suffered the bawling-out in silence, but he was cheered to see that neither vehicle appeared to have suffered serious damage: Arnold's handbrake had not been fully applied.

So it was that, when Joe Arnold had cooled down and Peter Cartwright had grovelled suitably, the two men decided to forget the incident and go their separate ways. And that would have been the end of what promised to be a total non-event, but for the fact that, later the same day, Arnold made a closer inspection of his Rover and discovered minor paint damage. His garage estimated the cost of repairs at a reasonable £14.

The situation took another turn when a friend convinced Joe Arnold that he should report the matter to the police. After all, as he hadn't exchanged names and addresses at the time of the bump, he had no idea where to send the bill. What he did have for the police, however, was Peter Cartwright's registration number, scribbled on a cigarette packet.

When a police constable called, three days later, Cartwright quickly realised that he could land himself in trouble if he accepted the invitation to make a written

statement about the incident—which was, by then, becoming a rather vague memory. He declined. But the PC was sympathetic, and pressing, and when he asked Cartwright to *tell* him what had happened, the youngster obliged. Minutes later, what amounted to an unsigned admission of guilt was in the officer's notebook.

It was all the police needed to bring a prosecution, and it led Peter Cartwright to the local magistrates' court, where he admitted offences of failing to report an accident and driving without due care and attention. He was fined almost £100, and the two endorsements on his nearly-new licence were destined to make their impact on his next insurance premium.

Chances are that, had he learnt his Highway Code, the court case need never have happened, says Jack Smith, manager of the AA's head office legal department. 'Where Peter Cartwright went wrong was that he failed to exchange names and addresses at the scene of the accident. The extent of the damage was irrelevant, for, if two vehicles merely *touch*, technically speaking there has been an accident and the provisions of Section 25 of the Road Traffic Act 1972 (as amended) come into operation.

'This states that you must give

the owner's and your name and address, and the vehicle registration number, to any person reasonably requiring it,' says Smith. 'Any motorist not knowing that is asking for trouble.'

'But, provided Section 25 is complied with, and no one has been hurt, there is no legal requirement to notify the police.'

Should the police call on you, however, Smith is inclined to suggest that you merely answer the questions indicated above, and at the same time produce those documents the Road Traffic Act requires: 'You are obliged to produce for inspection your driving licence, certificate of insurance and, if applicable, the Ministry of Transport test certificate. In certain circumstances you are also required to give your date of birth.'

'Before making any statement or talking about the incident, try to find out from the police officer what led him to question you, and, until you find out from him precisely how you are involved, say: 'I will take advice and consider what statement, if any, to make about the matter.'

Generally speaking, though, the police are not interested in no-injury road accidents, provided the formalities have been complied with. Minor accidents happen by the thousand, and life is too short to turn them all into court cases.

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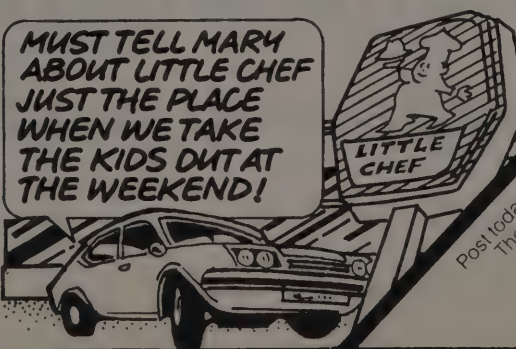
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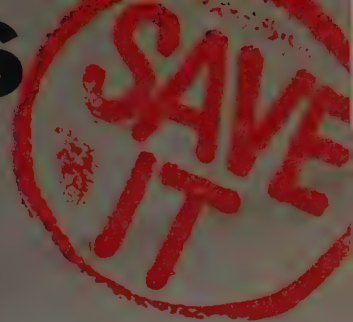
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Cost-cutter's Curriculum



Beat the maze



Traffic jams, one-way systems, roadworks and poor signposting are a few of the everyday fuel-wasting obstacles placed in the penny-pincher's path. Know where they are—and know where you are on a good roadmap or town streetplan—and you'll sail through to your destination with the minimum of delay, less miles spent in bewildered route-finding, and none of the exasperation that can lead to poor economy-driving. A couple of minutes spent plotting the route ahead (with an ear open for traffic-congestion news on a local radio station) is a sure way to get streets ahead in time and fuel savings.

Salesroom sages

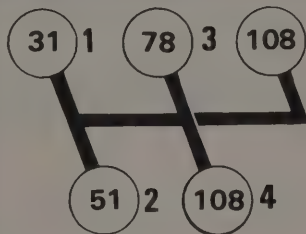
Every 100lb of car needs about 13gal a year to shift it: buy a bigger vehicle than you really need, and you pay the price in fuel. So look at road test reports and showroom specifications for lower kerbweight and clever use of interior space to provide enough room in a small package. Look, too, at the car's shape: a small frontal area cuts wind resistance, meaning less work for the engine, and a well-streamlined body brings savings in fuel consumption at higher motorway speeds. Worthwhile fuel-saving

equipment (recoverable in the car's resale price) is an overdrive or five-speed gearbox. Also consider the power-to-weight ratio: a 1300cc-engined version of the car you want may be less thirsty than the 1100cc model (compare AA/DRIVE road test reports) and, again, the price difference should be recouped on resale. Estate cars may have lower overall gearing (bad for mpg) than equivalent saloon-car versions, so consider if you really need that extra load capacity.

That figures

By law, all car showrooms must display a copy of the Department of Energy's approved fuel-consumption test results, so you can make your own comparative checks on the fuel economy of models in which you are interested. These are the best standardised figures that the DoE can provide, but, being standardised, they are something of a blunt instrument—see page 4 of this issue. Take along DRIVE road tests or AA reports for more realistic comparisons.

Geared up for savings



Whatever the car, it runs at its miserly best in top gear (or overdrive), so change up whenever you can. But accelerating fast to get into top gear or overdrive wastes fuel. And change down before the engine begins to feel laboured or lumpy: cruising at 18–20mph does *not* save fuel.

Advance drivers

Anticipation of traffic events in the car's path is a key to economy—and safe driving, too. Avoid wasteful acceleration and subsequent hard braking by 'reading' the road ahead so that you're never caught in the wrong gear;



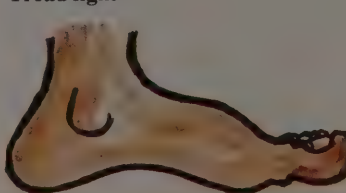
speeding-up when you should be slowing-down; or travelling too close for comfort to the vehicle in front. Your passengers will appreciate the restful progress... and you'll be more welcome at your insurance company's office.

Straighten up



Don't corner too hard or too fast: scrubbing-off the car's speed on the tyres shortens tread life and means that you're going too fast for economy. Even-out cornering speeds with a little *extra* pressure on the accelerator, and use the minimum necessary turn and effort on the steering wheel.

Tread light



In fuel saving, there's no substitute for a light right foot on the accelerator pedal. Treat the throttle like a sensitive tap, using only slight increases in pressure until fuel-flow corresponds to the

What you need to know to go farther, save money and spend less time with petrol-pump attendants

speed or gentle acceleration that you require, then backing off the pedal *slowly*. It's surprising how much less throttle you can use to maintain speed than you at first think is necessary. Thinner-soled shoes may help you treat the pedal more sensitively.

Liking it hot



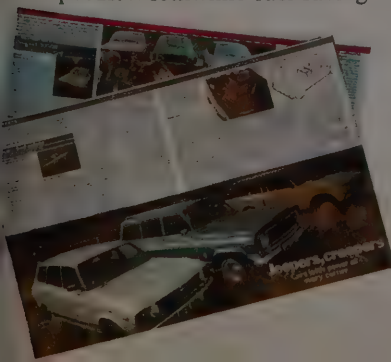
An engine is at its most efficient when hot, so, at the end of each journey, try to do all the manoeuvring necessary for an easy drive-off *before the engine has cooled*; this applies to parking at work or garaging at home. Reverse in, so that you can get a clear run out, perhaps getting someone else to shut the door or gate after you so that you needn't stop the car.

Stranglehold

Keep choke use to an absolute minimum: engines use *twice* as much fuel when the choke is used, and can often run smoothly much sooner than drivers realise. Experiment during your daily run, putting in the choke a few yards earlier each day. Your engine will last longer, too, as excess choke contributes to piston and bore wear.

Pool resources

Organise a car-sharing rota with work colleagues living near you or on your daily commuter route. Even if you are the only driver on the rota, contributions by your colleagues can considerably reduce your car expenses. Remember, there's no danger of infringing your insurance policy



cover, provided that the contributions extend only to proportional



petrol costs and other running expenditure; profits or gifts given for helpful service are strictly out. This is DRIVE's best fuel and money-saver.

School-run



The generally short distances of school runs are real fuel-squanderers, with the engine cold and choked for most of the trip, so big savings can come from organising shared cars. Take it in turns to collect and return. And use the same rota for weekly shopping trips—with a few friends in the car, you might even be able to bulk buy, saving on the week's groceries, too!

Draught dodgers

An empty roofrack can increase wind resistance and can add up to 5% to a car's fuel consumption; a badly packed rack can dent consumption by 25%. Take off the rack when it's not in use, and, when it's *really* needed, load it sensibly: put smaller cases at the front so that the load height increases in steps, and smooth airflow by tying a tarpaulin or heavy plastic cover tightly over the load (the AA Rackpack is a convenient accessory).

Weight-watchers

There are always journeys that have to be run fully-laden—the family holiday, for one. Distri-



bute passengers, as well as tents and leisure gear, as evenly as possible: the car will handle better, saving tyre wear. And smoother always equals fuel economy.

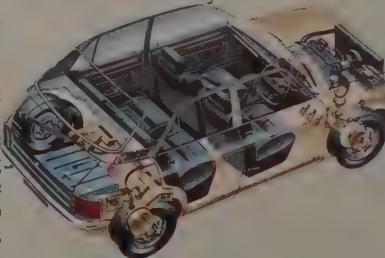
Gas wastes gas



A small hole in the exhaust system may not create an illegal noise nuisance, but it can cause inefficiency in the system and contribute to fuel wastage—not to mention failure in an MoT test. Listen for the 'dry crackle' of unsilenced gas, and make a temporary repair on a small hole or replace a badly corroded system quickly.

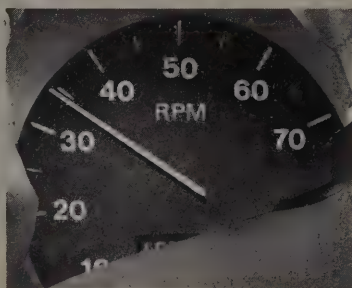
Slimmer's digest

Lose weight and save petrol! Even if you can't slim for economy, unload wellington boots, fishing and golf gear, and anything else in the boot that you can do with-



out. Regularly hose off accumulations of road dirt under the wheel-arches, behind bumpers and under the floorpan. Remember—every 12lb of weight saved could reduce your fuel bill by £2 a year on present prices, and there's the double-dividend that a clean car underbody is less likely to corrode.

Idle lazily



Stop-start commuter traffic means that the engine is idling for a lot of the journey, and too high an idle-speed wastes fuel, disguises other engine-tuning ills. Warmed-up engines usually idle at 850–950rpm—a garage can check this if your car has no tachometer.

And resist the temptation during those boring minutes at traffic lights to blip the throttle: that's just fuel down the drain.

Sticky problems

A common barrier to economy-driving is a sticky throttle action, or stiff choke control. Check along the throttle-pedal cable to ensure that it isn't kinked or contorted, through to the linkages at the carburettor, which should be lightly oiled at major service intervals; see also that sloppy carpeting doesn't foul the pedal's action. Regularly inspect the action of the choke to see that it returns fully when the control is pressed 'home'.

Catch cold out



Cold is an enemy of economy, so it's worth keeping the engine snug. For some older cars, it's possible to buy a slightly hotter-acting 'winter' thermostat that will warm-up the engine quickly (and can be used all year round). In icy weather, blank-off part of the radiator with securely-attached board, metal or thick plastic sheet—up to 90% of the grille can be covered. Alternatively, cover part of the radiator itself with cooking foil (*but not on cars that have electric cooling fans*). If your car is garaged between daily runs, up to 30% of the engine's heat can be retained by covering the bonnet with a thick blanket, and starting and economy will be much improved for the day's second run.

Well-oiled

Shop-around for big-name-brand oils in economic 5litre cans—best prices are at High Street super-



markets and spares shops. But be wary of fuel-economy claims made for low-viscosity oils; they are rarely sold at a discount, and using them infringes the warranties of major manufacturers such as Austin Morris. Own-brand supermarket oils may be deficient in important additives, giving little latitude for over-running oil-change intervals.

Oil well



Simplest DIY pound-pinching job on most cars is the oil change. At a garage, you'll pay the top forecourt price for oil, never see the odd valuable pint left in the bottom of the can, and receive a bill topped by an hour's labour (an average of £8 is the going rate) for what would take 30 minutes in your own driveway with a £3.50 bulk-bought can of oil

Tread hard



Check pressures weekly and maintain tyres at the manufacturer's recommendation for laden or high-speed motoring—that's usually 2–3psi higher than normal (see page 45). This will lower the rolling resistance of the tyres, and saves some fuel. But do use a reliable tyre gauge and airline—see page 45.

Tread miserly

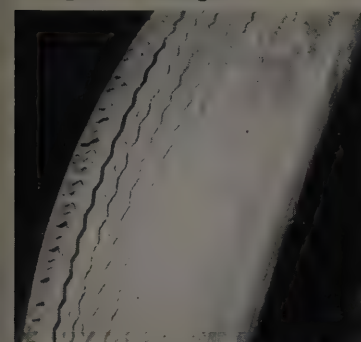
Radial-ply rather than cross-ply tyres can save up to 4% of the fuel bill, as they lower a car's rolling resistance. But, if you're switching to radials, you'll have to replace all five tyres at once, so weigh-up the advantages carefully; radial-plys are costlier, but last twice as long as cross-plys. If you never exceed 70mph (nor cruise fast while heavily laden), quality, branded remoulds may be worth considering. You should, however, realise that you are

buying a part-used, reconditioned article. Prolong active tyre-life by regular inspections for uneven wear (see 'Straight-line savings'), removing stones from the tread and having minor puncture



repairs carried out promptly.

Straight-line savings



Uneven wear of a tyre's tread pattern may indicate steering misalignment or bearing wear, both of which cost money and fuel. Alignment faults increase rolling resistance and wear tyres. Checks cost very little, especially when carried out at the same time as tyre replacement. Remember—even a small knock against a kerb can upset alignment.

Get switched off



No form of energy comes for free, and that goes for the electrical power consumed by the car's many accessories. Electricity is power from the generator that is, in turn, driven by the engine, and every unnecessary watt consumed means wasted fuel. Switch off high-current-demand accessories such as heater fans, heated rear windows and in-car entertainment, but leave on headlamps and high-intensity rear foglamps for safety's sake if the road conditions demand it.

Bright spark

You may improve the car's cold starting, save (in the long-term) up to 5% on the fuel bill, eliminate regular-service costs of buying and fitting contact breakers and reduce distributor wear . . . by fitting a contactless, fully-electronic ignition-system kit. But it could be two years' motoring before the investment pays off. Check that the kit you buy can be modified for another distributor type: you may change your car before the cost is recovered.



Star gazing

We all know the driver whose car is designed to run on 2-star petrol but who, now and again, 'gives the car a treat' with the odd tankful of 4-star. Well, that's bunkum straight from the annals of motoring mythology. Your car is built to run on a particular octane rating (star-grade) of fuel, and, if it won't, it's almost certainly a tuning problem—nowt to do with petrol. Use the lowest-octane petrol possible consistent with even idling and absence of 'pink-ing' during hard acceleration.

ROL CALL

A million leaflets, expected to reach 5million motorists, are being distributed by the AA as part of its energy campaign, 'Save a little to save a lot'. A cartoon character called Rol spearheads a fuel-misers' charter with the slogan 'Take care of your Pet Rol', and commonsense advice about

stretching the gallons includes:

- Choose the correct grade of petrol
- Drive gently, getting into top gear as soon as possible
- Ensure correct tyre pressures
- Tune the car regularly
- Check and clean carburettor jets, and adjust the idle speed
- Check, clean and re-gap sparkplugs and contact breaker points every 6000 miles.

The leaflet is in high demand with the worst offenders in the economy stakes—fleet owners, who have the difficult task of persuading drivers to save fuel they don't have to pay for.

TAKE CARE
OF YOUR
PET ROL.



Petrol economy gadgets are advertised in most newspapers and motoring magazines, but DRIVE has yet to find one that meets its maker's claims.

To prove the point, DRIVE fitted all the gadgets shown here to a Ford Cortina 1600, and drove over an 11-mile circuit against the stopwatch. We were pleasantly surprised to measure an improvement as high as 2.2%, with consumption falling from 32.7mpg to 33.5mpg—but the car ran rougher, too—thanks to an air-bleed device. The bill for that 1.2mpg saving? £100.

But the inventor's—and DRIVE's—search has to go on. As AA engineer Laurence Pearce puts it: 'The hope is that, one day, someone somewhere will produce something sensible.'

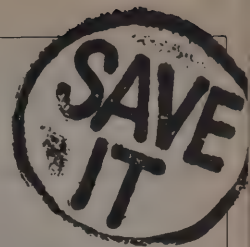


Switch to Michelin for longer life.



**SWITCH TO
MICHELIN**

Gripping tales



Part 1

ROLL UP, ROLL UP...

KNOWING HOW important tyres are to safety, and how different they can be in characteristics and price... what precisely do you look for when buying? And how do you go about it?

First, go to a tyre specialist—a *real* specialist, rather than somebody who has simply rented cheap premises to make a fast buck by posing as one. Membership of the National Tyre Distributors Association implies some professional knowledge and responsibility.

There's something to be said for matching the tyres that your car had as original equipment, for the originals were selected to suit suspension characteristics.

It is tempting to try and save money when buying, but a cheap-

brand tyre, even if safe, is likely to wear out sooner: generally, you get what you pay for.

There are all sorts of exotic tyres coming in from far-off countries, and some, such as those made behind the Iron Curtain on machinery from the West, are not at all bad. Others, however, are inferior, and, if you're in any doubt, it's safer to go for a name that you know you can trust—any of the British, French, US or Italian names that have been around for ages.

Steel and nylon-belted good-name radials for cars such as Ford Escorts and Vauxhall Chevettes and Vivas usually cost

more than £25 each, and £28 for Ford Cortinas and the like—both plus £1.50 for wheel-balancing.

If you don't repeat the originals, watch carefully your speed-rating (see overpage), and *don't* mix radial- and cross-ply tyres, except as allowed by law. If you do mix, you *must* have two spares.

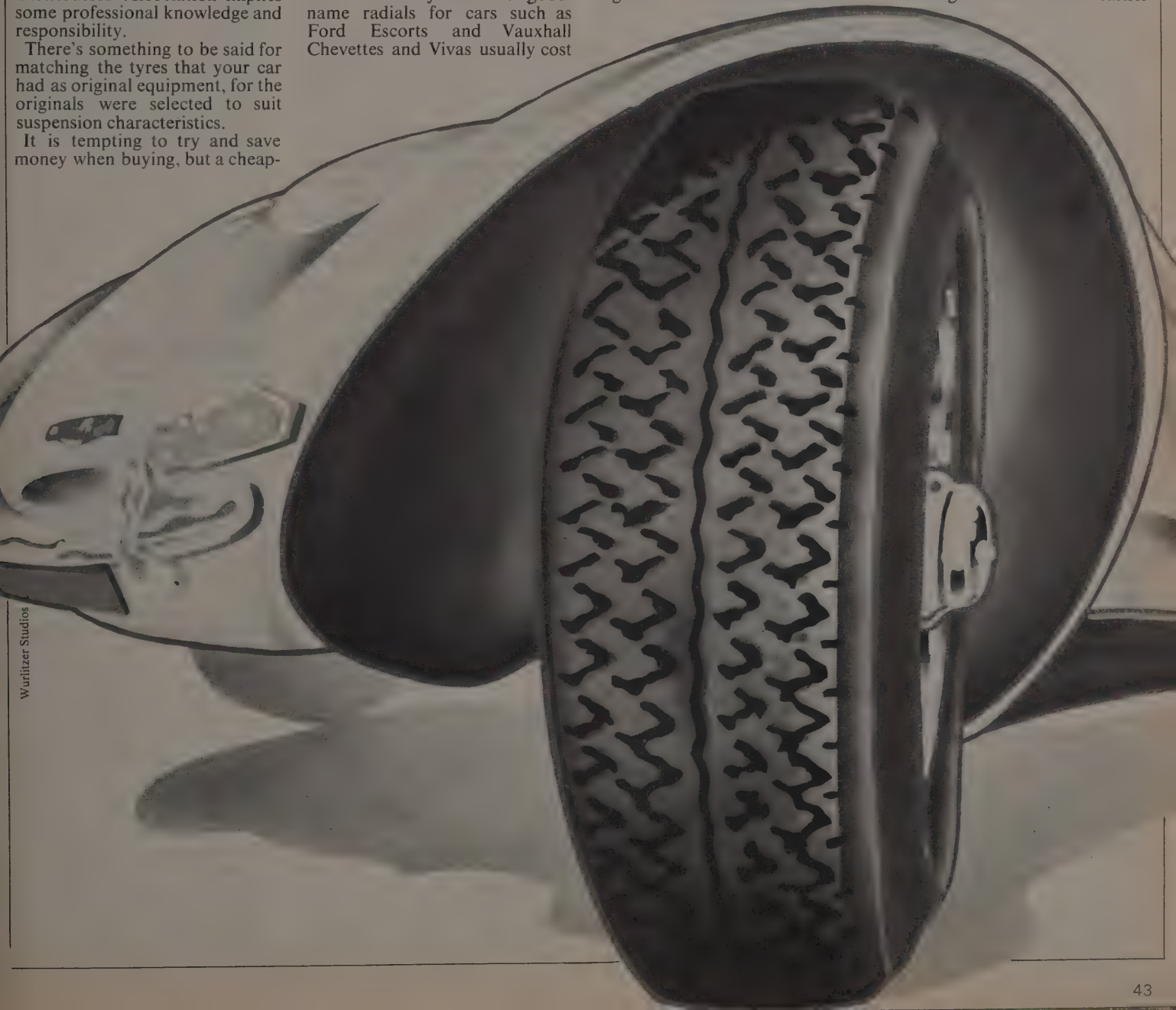
New tyres with buffing scuffs on their walls are suspect. Information that you should possess has been removed. Don't buy.

Retreads and remoulds save money, but buy only those from a big-name manufacturer or re-

treader: theirs will be safe at normal speeds in Britain, though two or three hours at 70mph on a motorway may do them no good. *Never* buy re-cuts, not even if you are going to scrap your car.

Foreign manufacturers' downgraded imperfects with speed restrictions stamped on their sidewalls (some only 15mph) are for farm-vehicles only, but, as DRIVE warned in January/February 1977, some have been sidetracked and the restrictions scrubbed off: *they could be lethal*.

It all goes back to our earlier



advice: buy from a reputable specialist, even if you pay rather more, because it's your life you are buying.

Gripping tales Part 2

WRITING ON THE WALL



EVEN THE least-curious motorist must occasionally wonder what those mysterious words, numbers and letters on tyres' walls actually mean—205VR14, and the like.

To the initiated, these symbols signal a variety of information, some of it important to the driver. For example, be sure that the speed-rating is right for your vehicle's performance potential, even if you don't exceed 70mph. You could be prosecuted for having the wrong tyres for the car.

Markings, says the British Rubber Manufacturers Association, are in two main groups: information that makers have long used to indicate make, size and type; and marks now required by the laws of other countries to which UK tyres are exported, including Australia and the US.

In the first group are the maker's name, or the brand name, and a commercial designation or some identifying code—perhaps KP200, Ultra HM, or Roadgrip Extra, to quote but three. Then you have the tyre's size and speed rating. Example: 175 (width in millimetres) SR standard radially for speeds up to 113mph) 14 (wheel-rim diameter in inches). Or, instead of SR, the speed rating could be HR (130mph), VR (more than 130mph), or SR Reinforced (105mph).

The speed-rating is established on a drum tester: it does not imply that you can drive safely for hours at that speed on a hot tarmac road.

The size may be followed by a number, perhaps 70. This is the profile proportion, the tyre's wall-height in this case being 70% of its width. (There is a trend towards shallower tyres, allowing space for bigger brake discs and drums, among other advantages.)

Cross-ply tyres will be marked, for example: 5.20 (width in inches)—10 (wheel-rim diameter in inches). This tyre is good for speeds up to 75mph; on a 12in wheel-rim is for speeds up to 85mph; on 13in and over, for up to 95mph.

Alternatively, it may be marked, say, 5.9S10—that's a 5.9in-wide tyre on a 10in wheel that per-

forms at speeds up to 95mph. There's a 12in version for speeds up to 100mph, a 13in for 110mph, and an H-range for speeds above those on S-tyres.

Finally in group one comes the word Tubeless, identifying a tyre sealed to the rim, holding air unaided by any tube inside. (Tubes are still needed with wire-spoked wheels, whose nipples allow air to leak out.)

These facts are all you need to know when buying replacement 'boots'. If you get a different make, be sure to have the same size and class, including Tubeless (if applicable).

The second group of symbols, of academic interest to the user, originated partly to meet various makers' own requirements and partly to satisfy bureaucrats, including Eurocrats.

Type Approval marks, for example, are needed only on tyres fitted to new vehicles after 1 August 1978. One is the E-mark—a capital E followed by a number, both in a circle (not legally necessary when a tyre is replaced). If the code in the circle is E11, it means that the British government granted Type Approval.

Various other codes include a Load Index (maximum load-carrying capacity); maximum acceptable pressure (required in the US); a DT reference (again for the US, indicating compliance with local safety standards); and perhaps the announcement, 'Sidewall 2 plies nylon; tread 2 plies nylon and 2 plies steel'—again for the US.

You may also find TWI, for Tread-Wear Indicator, a band that shows up as the tyre nears the end of its tread life. And there's M&S—nothing to do with Marks & Sparks', but an indication that the tyre's tread pattern is designed to cope with the mud and snow of winter use.

Gripping tales Part 3

BLOWIN' IN THE WIND



MOTORISTS graduating from bicycles whose tyre pressures were checked by pinching them, once kicked their car tyres to estimate whether they were adequately inflated. Some still do, though even this effort is too much for many drivers (see panel above). Others care enough to give the round black things an occasional squirt of air from a garage-forecourt airline, with a touching faith in the gauge's

Softly, softly... crunch!

JUST IMAGINE that you're hurrying to meet an appointment. Suddenly, you are into a bend that's tighter than it looked, and you pull hard at the steering wheel. The car should respond smoothly and predictably. But it doesn't because one of its tyres is soft. Instead, it starts to swerve from side to side. Suddenly frightened, you apply the brakes, and very quickly you have lost control...

It's all a question of inflation. Too much or too little, and a motorist could be playing Russian roulette at 70mph, with one important difference: a bullet can scatter only one set of brains.

The same car, on a straight road, still could find its way into the accident statistics, as an under-inflated tyre will tend to flex excessively, overheat and destroy the rubber-to-casing bond... and then, perhaps, with a heart-stopping bang, throw a complete tread or burst.

How, why does it happen? It's an academic question as you lose control of your vehicle. Yet the answers are simple, and the consequences so avoidable.

Disasters apart, tyres don't need to be all that wrongly inflated to put pressure on your wallet. Apart from losing months of tread wear, drivers certainly use more petrol, and risk the wrath of the courts, by driving on tyres that are not 'correctly inflated' a charge that can cost dearly.

The law doesn't specify exactly what margins of error are acceptable—a confusing, if wise, omission: tyre pressures need

accuracy—sometimes misplaced, according to DRIVE's survey above.

This casual attitude can produce badly worn treads through under- or over-inflation. Lack of pressure burns off tread at a tyre's shoulders (shoulder-wear). Too much wears away the middle line of rubber on cross-ply (crown wear); it does not show as crown wear on radials. Apart from adding greatly to the cost of motoring, these faults are dangerous... which is why the law steps in.

At best, grip on the road's surface is limited to four patches of rubber about the size of a man's foot. In an emergency at 70mph,

sometimes to be varied according to the load they carry; in any case, pressures can increase 2–6lb per square inch (psi) as a result of heat generated by driving at speed. In the AA's experience, however, police usually get interested only when the error exceeds 4psi under normal conditions.

Nonetheless, the law appears to have a negligible influence on the habits of the average British motorist, who knows little, and seems to care less, about tyre pressures. This summer, DRIVE went to Britain's largest municipal multi-storey carpark, armed with questionnaires and tyre-pressure gauges, and found that:

One in three cars had tyres that were under-inflated to such an extent that they could create handling problems, and undoubtedly would suffer markedly reduced tread life

One in four had tyres that were seriously over-inflated, and were similarly more vulnerable to rapid tread wear

One in eight had side-to-side imbalance of tyre pressures on the same axle—perhaps the most dangerous condition of all, for it can have the same, potentially lethal effect as mixing cross-ply and radial-ply tyres.

(The exercise was supported by earlier AA investigative work into several hundred vehicles in other public carparks. In this, attention given to tyre-care, including pressure maintenance, was discovered to be at its lowest in two groups of car—ageing, neglected run-arounds, and (surprisingly) distinctly more up-market and

Gripping tales

PRESSURES IN THE CARPARK



even on a dry, well-surfaced road, those four patches may be all that separate you from disaster.

Parliament has decreed that a tyre must have a minimum tread-depth of 1mm over at least three-quarters of its width around its whole circumference. Experts, including the AA, advocate 2mm. And no caring driver takes advantage of the legal offer to have a quarter of his tread bald.

Other law requirements are: No cord must be visible; no bulge caused by structural failure; no break in the fabric longer than 25mm, or 10% of the tyre's whole section width

A tyre's type (for example,

even to high-performance cars... Among these, one in six tyres were over-inflated by 20-80%, or under-inflated by 20-60%; and one in 10 had severe side-to-side pressure imbalance on the same axle, affecting handling. (One in 12 had imbalance in excess of 25%; one in 50 were out by more than 70%.)

And how can it matter whether or not garage airline gauges are accurate or not—a common complaint, and currently a matter of garage-trade concern—when two out of three drivers questioned by DRIVE had no idea at what pressures their tyres should be set? The answer ‘I can’t remember offhand—I’d have to look in the handbook’ may give away the owner who checks tyre pressures only irregularly; more worrying, perhaps, were those who told us, confidently, that they knew exactly what their cars’ tyre pressures should be... and then gave wildly inaccurate figures.

Drivers should check their vehicles’ tyre pressures once a week. That’s how important a job it is. Yet among 100 answers to DRIVE’s ‘How often?’ question, we heard:

‘Surely the garage does it at the 6000-mile service.’

‘Once a month, give or take—but I never look at the spare.’

‘When they look flat. The spare? Never.’

Maybe once a month.’

‘Isn’t that job supposed to be

TALK TO any expert in the tyre industry, and you’ll hear damning criticism of garage airlines. For, even if a garage tries hard to look after its expensive inflating equipment, it cannot prevent the careless motorist from dropping the gauge on to the forecourt, or even driving a car over it.

DRIVE set out to measure the accuracy of nearly 400 airlines all over Britain... and was surprised to find that the situation just isn’t as bad as everyone says it is. In fact, it would be possible

speed-rating) and air pressure must conform to the use to which it is being put

Re-cut treads are forbidden on passenger cars, and differently constructed tyres (radial- and cross-plys, for instance) must not be put on the same axle. With radials at the front, cross-ply or bias-belted tyres must not be at the rear; with bias-belted at the front, cross-plys are forbidden at the rear

All of these rules apply to trailers, too.

Bald and otherwise-defective tyres feature significantly in crashes, and in 1977, the latest year for which government figures



done during the MoT test...? ‘When they look... well, soft.’

Some drivers did of course say that their cars’ tyres were checked ‘every Saturday’; but, when DRIVE put a tyre gauge on their vehicles, many of these ‘regular’ testers were found to be no better than most self-confessed sloppy Joes.

What struck our investigators most, however, was the apparent lack of concern when owners were informed that their tyres were dangerously inflated.

In the end, we packed up the gauges and gave up, dispirited...

SOFT OPTIONS

Who decides just what *your* car’s

correctly to inflate your car’s tyres at 85% of the garages that we checked.

The key word, though, is ‘possible’: sadly, many airlines were inaccessible for one reason or another—for use by ‘regulars only’, and so on—and many gauges, fouled with oil and/or water, were difficult to read. And, as our experiment above shows, it doesn’t take much to discourage the never-eager motorist...

Of the other 15% of garage gauges checked, nearly one in 10

are available, 411,654 vehicles (excluding bicycles) skidded into road accidents.

When the Transport and Road Research Laboratory spent four years investigating 2130 accidents, tyre faults loomed larger than any other vehicle defect: they were a factor in one in every 10 vehicles involved, and main contributory factors in 67 accidents.

And remember: *each* defective tyre constitutes a separate offence; each could bring a £100 fine and an endorsement; and three endorsements mean automatic disqualification for the person behind the wheel.

tyre pressures should really be?

Many of the car industry’s decisions are subjective, based on reports from testers driving to the limits of adhesion, with tyres screaming for mercy. But, when a new vehicle is launched, a manufacturer may also look to tyre producers to provide an answer to unresolved problems of comfort, noise, ride and handling. And that can lead to your new car having softer tyres than is necessary or wise...

‘Commercial pressures,’ says the AA’s chief engineer, Marcus Jacobson, ‘are sometimes then brought to bear to convince tyre companies to take a more

showed pressure errors, and one in 20 were not working at all.

Some local trading standards officers have set up their own testing procedures, and it was hoped to direct their efforts through a new scheme called TYPEAC (tyre-pressure equipment accuracy).

This aimed to ensure a 12-monthly check-up for 30,000 airlines, with plaques issued to garages. But, with public-spending cuts, there is a fear that TYPEAC may become so much hot air.

“realistic” view of the tyre-pressure options—in other words, to lower their pressure recommendations. Since this merely shortens tyre life, and only very rarely produces catastrophic carcass overheating, few tyre makers protest too loudly.’

In most instances, Jacobson agrees, the pressure drop is small—2-3psi—but he also mentions at least two instances where pressure problems were the result of nothing more ‘scientific’ than a handbook printer’s error. This meant, he says, that high-performance cars were running on 26psi instead of 36psi, considerably piling down tyre-life and safety margins.

On the other hand, manufacturers are understandably irritated by the way that research and knowhow can be wasted unless tyres receive some care and attention.

Over-inflation can weaken the cord body of the tyre by reducing its ability to absorb road shocks; tread cuts are more likely.

Under-inflation is even worse. The excessive flexing that can result may scrub off the tread, and it has been established that a tyre running at only 80% inflation will lose up to a third of its mileage life. Excessive flexing will also cause increased rolling resistance, petrol consumption (see page 40) and heat build-up.

The Golden Rules

Check tyre pressures once a week, and do it when the tyres are cold before a journey

Never ‘bleed’ a tyre of air to compensate for rising pressure on a long journey. It will simply increase tyre flexing, which will in turn increase the temperature—giving even-higher pressures

See that valve caps are in place and screwed down finger-tight

Keep tyres free from oil, grease and stone chippings

Check tyres for uneven wear; if in doubt, go to a properly equipped garage

Avoid hitting or scraping tyres on kerbs.

ROBERT OXFORD

Gripping tales Part 4 BRACE YOURSELVES...



MUCH HAS HAPPENED to tyres since John Boyd Dunlop made an inflatable tube from a rubber sheet, covered it with cotton, and nailed this to a wooden disc. Developments of it gave pedal cyclists a faster, safer, more

comfortable ride. That was in 1888, and the pneumatic was not long in spreading to the new craze of horseless carriages.

Dunlop was a Scotsman working in Belfast when he invented his tyre, and it was Britain again that led the world by inventing the radial-ply tyre, patented in 1913. But, as has so often been the case, we failed to make it commercially viable; it was left to French Michelin to do this in 1948. But Michelin, from the start, made its radials steel-braced—another leap forward.

Steel bracing in radials better supports the tread, keeping it flat on the ground while the pli-

able walls flex, which they do far more than in cross-ply tyres. Textiles—usually rayon, polyester or nylon strands—are widely used for bracing, but steel wire is stronger and dissipates heat more efficiently.

Michelin had to spend millions to find a satisfactory way to bond steel and rubber, and, when other makers first experimented with radials, they went for textiles. Only much more recently have they switched over to steel.

Less affected by rolling heat, steel tends to give slightly better handling than textile-braced radials, and up to 9% better fuel economy than cross-ply tyres (they have less rolling resistance), and the tread can last twice as long as a cross-ply's. With their greater tread area, radials also offer better and more-predictable handling and braking.

It was not, however, until well into the 1960s that radials became common on new cars in Britain, largely because of the immense capital that Michelin's competitors knew they would have to invest to re-tool for production. And it is mainly for this reason that the US hangs onto cross-plys; although, with its straighter roads and lower speed limits, the handling factor isn't so important for American drivers, and until comparatively recently they haven't been much concerned with fuel economy. Also, with so many Americans buying new cars annually, a tyre's life tends to concern only second- or third-hand owners: tyre manufacturers think hard before re-tooling for those customers.

The Americans did manage to produce a bias-belted compromise from existing machinery that was better in performance than a cross-ply tyre but still inferior to a radial. Times, however, change and machinery wears out; now, the signs are that, earlier plant having run its span, radials for the US, too, are 'in'.

Gripping tales Part 5

GOING SPARE



SURVIVING The starting-handle as the last relic of early motoring is the spare tyre, for which, of course, a spare wheel is also necessary. The fifth tyre and wheel add both cost and weight to a car, and *losing* weight is a fuel-saving possibility.

Hastening its obsolescence are run-flat tyres and wheels. First on the market, six years ago, was Dunlop's Denovo, a self-sealing

tyre on a special rim from which it cannot escape when deflated. So, even in a high-speed blow-out, control is retained. 'Flat', they retain a pressure of about 5psi, enabling them to run safely for 100 miles at up to 50mph—enough to get you to a garage.

In the past two years, Denovos have been improved in various ways. A solution has been found that automatically seals some

punctures before serious loss of air occurs, and allows others to be mended externally. But there is a cost penalty: four Denovo wheels and tyres cost about the same price as five wheels fitted with ordinary radial-ply tyres.

'Run-flat technology' (and you can bet that a vast amount of research not yet announced by other leading makers is going on)

Gripping tales

WHAT'S COOKING?

THERE IS MORE to modern tyres than just rubber. Every tyre is made up of a *series* of rubbers, synthetic and natural, that have widely differing qualities in terms of elasticity and hardness, and resistance to wear, oxygen, ozone and ultra-violet attack. These properties are carefully chosen and may be due to quite small amounts of chemical additives that act much like condiments in a 'chef's special': too little or too much, and the end-result is failure.

Oils, carbon black, sulphur, zinc oxides and silicates are essential ingredients that must be carefully weighed and controlled for consistency. In addition, there are finely spun, brass-coated steel wires, pre-stressed and twisted; and wide strips of woven-textile fabric.

The raw materials for tyres arrive in liquid, powder and solid form, and undergo a series of closely controlled mixing, kneading, blending, heating and cooling processes. The rubber is extruded like an endless strip of soft chocolate, in sheet form.

A tyre is made section by section, rather like making a layer cake. The quality of the end-result depends on the 'dough' mix, keeping the precision machinery clean, and the skill of the operators—there is still a great deal of handwork, even in the most up-to-date plants, where tyres are produced at an astonishing rate. Even so, it can all be wasted effort if the moulding machine—a sort of pressure cooker, with an inflatable inner bladder—is not operated at the correct steam pressure and heat for the appropriate time. And an improperly 'cooked' tyre is as valueless as a sagging, sour or burnt cake.

The tyre requires stiffening and strength, and this is provided by embedding the fabric in thin layers of rubber. Ensuring a safe heat-, shock- and distortion-resistant bond between the fabric and the rubber calls for special care and extreme cleanliness, humidity and dust control.

An inflated tyre is kept firmly in position on the wheel rim by its bead wires. These are a carefully-arranged bundle of sepa-

rate strands of pre-stressed and twisted wire embedded in rubber. Before they are stored as a series of hoops, they are wrapped with a kind of tape to retain this critical shape, waiting their turn to be assembled into the so-called 'green tyre'.

The rest of the tyre building is concerned with transforming the flat strips of rubber and rubber impregnated fabric into a cylindrical shape. This is done on a building machine, an operator applying the flat strips to the steel cylinder, layer on layer.

Like a good pastry cook, he applies them with a tuck here and there, rolling them on to lie flat and without a bubble, perfectly positioned one on top of the other. A trim with a sharp, heated knife ensures that there are no unwanted overlaps, gaps or ragged joints. It is vital that the ends butt perfectly, with no evidence of a joint.

The first layer forms the inner liner and is usually of Butyl rubber, which is impermeable to air pressure and makes the fitting of an inner tube superfluous. It is followed by the single or two plies of the carcass—fabric-embedded-in-rubber, that give the rolling radial tyre both strength and controlled flexibility. The closely spaced parallel strands of rayon, nylon or polyester run from one bead to the other. When the tyre is inflated, they radiate out from the centre: hence the name 'radial-ply' tyre.

On the older type of tyre—the cross-ply—the 'lay' of the strands is diagonal across the build drum at roughly 45 degrees, with a righthand bias on the first layer and an opposing one of roughly 45 degrees with a lefthand bias, to ensure equal stiffness in all directions when inflated.

Incorporating the hoops of the bead wire sub-assembly into the

looks like sealing the fate of the spare tyre.

One risk, though, will undoubtedly remain when the spare wheel goes: some drivers, unable to afford the time (or the money) to have a puncture repaired, will tend greatly to exceed the specified run-flat mileage. But *that* sort of driver is with us now, doing something equally daft... **GEORGE YOUNG**

tyre involves turning the projecting edges of the carcass ply over the bead hoops.

The sidewall strips are added next, one on either side of the build drum. The part-built tyre is then transferred to another machine that clamps the ends in bell-shaped housings, the central section being inflated like a football as the bell ends close in. This allows the tyre to take up its characteristic shape of a barrel, and it is at this stage that the breaker strips are applied.

There are at least two, one on top of another, that must be placed centrally (sometimes a capping strip of nylon, polyester or Kevlar is added, to give enhanced properties), and, when breaker strips are of fabric construction, the tyre is designated a 'textile-belted' radial.

The extruded strip of tread rubber is then applied as the top layer, and it is in this 'green' state that the casing is transferred to the moulding machine where the still-pliable casing is inflated by a special, tough rubber diaphragm under 200–400psi internal pressure. The rubber is thereby forced into the mould recesses that imprint on the final shape, tread and wall patterns and raised tyre markings as it is 'cured' under pressure and considerable heat for 12–20min. A chemical transformation called 'vulcanisation' gives the tyre its final shape.

While still hot to the touch, the tyre is expelled from the mould, checked, automatically balanced and graded. There is then a slow post-curing stabilisation process, which means that, for the first 50 miles or so, the tyre is still 'working'. As such, it should not be run at more than about 50mph for this period, after which it becomes virtually stable. **MARCUS JACOBSON**



Flat tyre—a conveyor-beltful of casing before the shaping-up process begins

The concise Unwin dictionary of tyre terminology.

bankee balancer bank balance. keeping the right 'balance' between the incomings and outgoings of your 'bank' account. Pirelli help you keep this balance by being a) competitively priced b) hard-wearing.

bothlodors both. Pirelli tyres give 'both' high mileage and superb wet grip. Fit Pirelli and you won't get any 'bother' for years.

combinale combination. Pirelli tyres have a 'combination' of steel and nylon belts. Not to be confused with 'combinations' which are underpants. Pirelli tyres do not have underpants.

delivereth deliver. provide as in "I'm sorry I couldn't 'deliver' the goods, I got a puncture". "Your company should 'provide' you with Pirelli tyres".

grippers (wetty) wet grip. the 'grip' properties pertaining to a tyre in wet conditions. See also weak handshake.

mileodes (maximost) maximum mileage. something every Pirelli tyre has been designed to give. Also Maximost Fulvius Mileodes – Roman Emperor AD 85-88.

mindbogglode mind boggling a state where ones 'mind' is 'boggled'. A condition often found in natives of Ireland who are continually falling into bogs.

nylonfold beltee a belt of nylon. used to dissipate heat and thus improve tyre wear.

radifold radial. a construction where the belts run around the tyre rather than across it. It provides higher mileage and better grip.

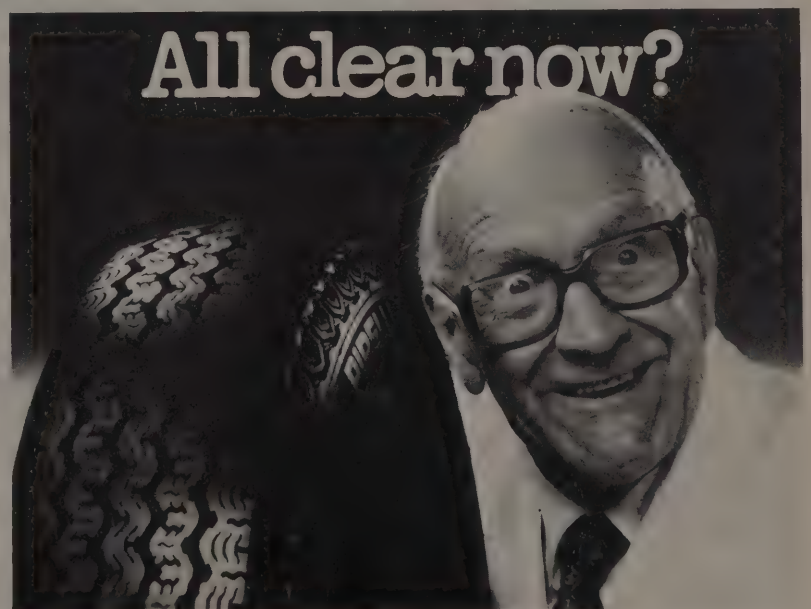
slippislider slippery conditions * i.e. ideal for tobogganing, skating, etc. However conditions which may induce sliding of vehicles. *May

include rain, hail, ice, snow, oil patches, mud, banana skins.

steely beltees steel belts. used to increase the mileage and durability of modern tyres. 'Belt up' is a common expression directed at back seat drivers who accuse the real driver of going too fast. Literally it means "Don't worry, dear, the 'steel belts' in my tyres can cope perfectly at this speed."

thrifty much inexpensive. cost saving. A term you'll understand better the longer you drive Pirelli tyres.

uttereth mumble utter curse swear moan mutter jabber jibber gabble. Typ. ex. This +!/? \$-ing tyre has only done fifteen thousand \$!***? miles and its two thirds *\$-***? worn. (Never uttered by Pirelli drivers).



PIRELLI
STEEL+NYLON

Reliant Super Robin 850 estate

Price £2808 On the road £2965

In the good-old, bad-old inter-war years, thousands started their motoring on two wheels, and progressed to a motorcycle-sidecar combination as their families grew. Later, Dad was able to exchange the combo for a dashing, new, three-wheeled car, such as the sporty Morgan. He still needed only a motorbike licence, and the three-wheeler enjoyed cheaper road tax, too.

This last advantage still applies today, but only one company, Reliant, of Tamworth, Staffs, now offers a family three-wheeler. DRIVE took to the road in the estate version of the four-model range in the hope of experiencing the elusive cheapness of inter-war years' driving.

Can Super Robin save petrol-powered civilisation as we know it today? Read on.

How it goes

Most low-volume makers of cars buy-in their engines from the big boys, as Reliant itself does for its Ford-powered Scimitar GTE; but the Robin uses a home-grown all-alloy engine. It's an elderly design that dates from Reliant's early three-wheeling days, and has grown over the years to its present 848cc.

Starting, whether from cold or hot, was reluctant on DRIVE's correctly tuned car, and testers had to fiddle constantly with the unprogressive choke to keep mobile for the first mile or so from cold. Idling was erratic, too, no matter what the temperature.

A light flywheel gives the little engine a sporty, free-revving feel and an instant response to a dab on the throttle. When it comes to acceleration, the Robin's a real flier, its through-the-gears 0-60mph time of 16sec being a creditable 10sec faster than most of its competition. After 60mph, the Robin levels-off very quickly, but by then the astonished faces of some 1300cc saloon drivers are hardly visible in the rearview mirror.

Top-gear acceleration times are also good, the 30-50mph haul just bettering the rivals in our table. Because of its high gearing (a long-legged 17mph per 1000rpm), the Robin's performance in fourth is not quite so chirpy as it is through the gears; the advantage is that the fledgling power unit is happy to cruise at the UK motorway speed limit. Whether its driver will be so willing is a matter we shall come to in due course...

The gear change has a delightfully positive clickety-click action as it slices around its narrow gate, though first gear can occasionally balk from

standstill. Intermediate gear ratios are widely spaced, with the high-ratio third just failing to stretch the engine to the 6000rpm limit attainable in first and second. The clutch has a longish pedal travel, and is weighty, but had no trouble dragging the test Robin up a 1-in-3 hill from rest.

Apart from a trace of sloppiness around the straight-ahead position, the Robin's steering feels direct and quick when a bit of lock is applied—so much so that just a twitch of the tiny, 13in steering wheel can create a jerky cornering line. (There are only 2½ turns of the wheel, lock to lock.) The steering, and the Robin's dry-road cornering ability, gives the three-wheeler a nimble, even sporty feel... up to a point. You know that point is reached as the nearside rear wheel parts company with the road—and the Robin demands a quick dose of opposite-lock steering correction to bring it safely back to earth (see How safe, overpage).

In the rain, the cross-ply tyres' limit of grip is reached much earlier, which makes it easy to induce a slide. The trade-off is that this happens at such low speeds, and with such progression, that it's not difficult to regain control. The tyres also 'tramline' badly on raised white lines, and their directional

stability is poor in motorway crosswinds.

When you sit behind the wheel of a Robin for the first time, everything seems sized for Noddy. The driving seat is no bigger than an infant's school chair, and (on the test car) its fore-and-aft adjustment twisted under the weight of an 11st driver. The footwells are also tiny, as is the steering wheel; but, that said, it's all surprisingly comfortable, even after a lengthy period at the wheel. Our main complaint with the layout of the major controls is having nowhere to park the left foot, except under the clutch pedal.

The comprehensive instrument pack is both attractive and easy to read—an object lesson to most big manufacturers of small cars. A single column stalk controls indicators, headlamp dip/flash and horn, while other minor controls are worked by easily-reached rocker switches. One spoke of the wheel masks the hazard-warning lamp—a needless fault when other lamps for oil pressure, ignition, indicators and main beam are neatly grouped in the two main dials.

The door mirror is unnecessarily awkward to adjust, and the width of forward vision is reduced by thick screen pillars. But at least the single-speed wipers sweep up to the driver's side of the screen, unlike those of some costly imports.

How comfortable

One snag of a three-wheeler is that any bump the front wheel may miss is almost certain to be hit by one or other at the rear. This plus extremely stiff suspension adds up to a harsh, jolting and generally unpleasant ride that evens out only when the road surface is billiard-table smooth. And the Robin's really set a-bobbing in winter by the central hump of packed snow and ice that's moulded by four-wheeled traffic!

Robins are far from quiet. The overall noise level is high, and it's difficult to talk with passengers at any reasonable cruising speed; but it's not the sort of noise that causes headaches. Around town, the light steering, easy controls and flexible engine are all attractive features. Curious, though, that the turning circle on left lock is only 24½ft when that to the right (the one that you need to be really tight) is 30½ft.

Getting in and out of the rear seat is complicated by narrow footwells and static seatbelts that tend to dangle at ankle-catching level. Provided that you are not too generously proportioned, the Robin's rear perch is surprisingly comfortable, though a lack of lateral cushioning

HOW GOOD

At-a-glance

DRIVE's verdict on the Reliant Super Robin 850 estate, taking into consideration its rivals, its price and what kind of car it's meant to be

Out of 10

PERFORMANCE

●●●●●●●●●●

FUEL ECONOMY

●●●●●●●●●●

HANDLING/STEERING

●●●●●

COMFORT/REFINEMENT

●●●●

INTERIOR/BOOT SPACE

●●●●●●●●

PASSENGER AIDS

●●●●

DRIVER AIDS

●●●●●●●●

ACCIDENT/INJURY SAFEGUARDS

●

RUST RESISTANCE

●●●●●●●●

RELIABILITY/EASE OF REPAIR

●●●●



RELIANT SUPER ROBIN 850 ESTATE

Front engine: 848cc/4cyl, OHV (chain); one SU HS2 single-venturi carb; 40bhp at 5500rpm

Rear drive: 4 gears; 17mph/1000rpm

Suspension: front—leading arm and coil sprung damper unit; rear—leaf-sprung live axle and anti-roll bar

Steering: worm and peg, 2½ turns/27½ft circle (*see text); 4J wheels, 5.20 S10 cross-ply

Brakes: drums all round

Parts/repairs (inc VAT)

clutch £25.30 (fitting 3.3hr)

exhaust £19.55 (0.5hr)

headlamp unit £4.03 (0.25hr)

laminated windscreen £77.61 (0.5hr)

oil filter and points £2.96 (0.4hr)

major service 12,000 miles (3.75hr)

Running costs per year per mile

Loss of value £510.28 4.25p

Total depreciation £127 1.06p

Insurance group £531 4.43p

Refer to company

THE RIVALS CLOCK IN

Skoda 105L

Citroen Dyane

Austin Morris Mini 850

Ford Fiesta 950

Renault 4TL

DISCOUNT

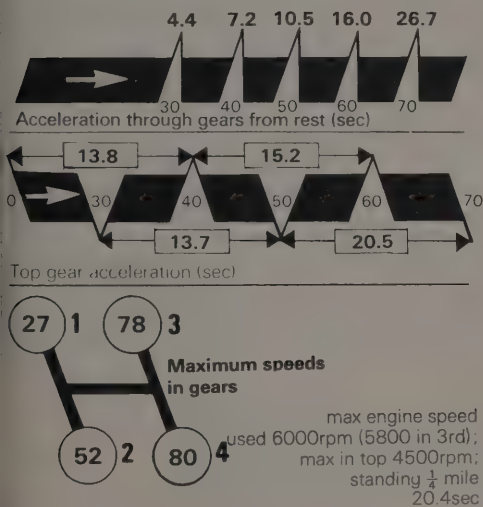
Cheap! cheap!

SAVE IT

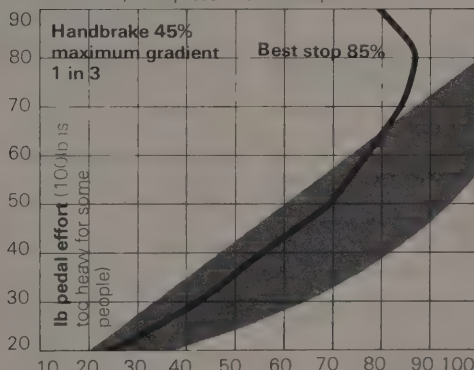


Ian Dawson

PERFORMANCE



BRAKES—pedal pressures and responses



Fade test pedal pressure needed for 75% stop (ideal car would show no variation)

55lb at start; **55lb** in constant use; **53lb** in severe use
Watersplash 90lb at first, **5** stops to recover

FUEL 3/4 star/95 octane min overall consumption 45 1/2 mpg effective tank range 225 miles/5 gal

Normal range of consumption

short journey, suburban	37mpg
motorway—68mph cruising	38mpg
hard driving, heavy traffic	40 1/2 mpg
mixed roads—brisk, 50mph cruising	44 1/2 mpg
quiet rural—40mph cruising	58 1/2 mpg

Consumption at steady speeds

30mph	83 1/4 mpg
56mph	54mpg
70mph	36mpg
max mph	24 1/2 mpg

SAFETY CHECKS

steering: energy absorbing?	No	hazard warning: fitted?	Yes
front seats: secure mounts?	No	interior: well padded?	No
head restraint?	No	w/screen: laminated?	No
front belts: effective?	No	doors: crashproof?	No
convenient?	No	childproof?	Yes
rear belts: fitted?	No	petrol: spillproof?	No
		brakes: failsafe?	Yes
		load sensitive?	No

ON-ROAD PRICE (£)	CAPACITY (CC)	FUEL OVERALL (MPG)	MAXIMUM SPEED (MPH)	0-60MPH (SEC)	30-50MPH IN TOP (SEC)	BEST STOP (% g/lb)	OVERALL LENGTH (FT/IN)	MAXIMUM LEGROOM FRONT (IN)	TYPICAL LEGROOM REAR (IN)	STEERING TURNS/CIRCLE (FT)
2221	1046	34	82	22.4	16.9	96/80	13' 7 3/4"	39 1/2	37 1/2	3 3/4 1/2
2423	602	41	73	26.9	20.5	95/90	12' 8 1/2"	39	40	3 3/6 1/2
2532	848	41	73	26.1	14.4	97/70	10' 0 1/4"	39 1/2	34 1/2	2 1/30
2782	957	41	83	18.4	14.7	97/50	11' 8 1/2"	40	39 3/4	3 1/31 1/2
2885	845	39	74	26.4	15.8	98/60	12' 1"	40 1/2	34 1/2	3 2/32

allows lone occupants to slide about while cornering.

Opening the estate's rear door to the side reveals luggage space that's more than reasonable for a small car; and, with the spare wheel propped up on a side panel, punctures cause little disturbance of holiday luggage. Two crude but harmless rubber clips quickly release the backrest to convert the estate into a surprisingly generous load carrier. Its limitations are the ease with which the unprotected rear body panels can be scratched, and Reliant warns ominously in the handbook: *'It is most important that a heavy load is NEVER positioned at the extreme rear of the vehicle behind the rear axle.'*

The Robin's heater is a cheap water-valve affair with a push-pull temperature control identical to the choke knob. Knee-level flaps pipe the warm air in, but there's little control of its temperature—it's usually all or nothing.

How strong

With a body made of glassfibre-reinforced plastic (grp), the Robin's panels do not suffer from weakening rust. But grp bodies have their own problems in areas of stress, and telltale surface crazing and hairline cracks were already in evidence on the floor of the test car's boot. Sadly, rust had set in on the chassis (as it had on others we've seen), though it is sturdy and should have a good few years of life. Chassis rust prevention is confined to paint alone.

There are some cars that seem to keep clean in bad weather. The Robin is one, and the only help it needs is a rear-screen wash-wipe mechanism that ought to be standard.

Mechanical reliability seems to vary widely. We hear of some Robin owners singing its praises, and of one or two who suffer engine trouble. In July this year, Reliant also recalled *all* Robins (from 1973 to date) for strengthening of their steering brackets.

How safe

The greatest source of worry

for our testers was the Robin's *safety*—both primary and secondary. As with all DRIVE's test cars, we drove the vehicle round a test-track steering pad to determine its stability. While it's not unknown for cars to cock a wheel in the air during this test, the cornering speed at which the Robin lifted its inside rear wheel was surprisingly low.

Under these *controlled* conditions, it wasn't too difficult for our testers to regain stability by applying opposite-lock correction. However, when they repeated the Robin's two-wheeling trick, and tried to correct as a driver might, in the panic of an emergency, by lifting off the accelerator's pedal, the Robin toppled on to its side.

Off the test track, on public roads, Robin drivers could find themselves in a similar situation when taking sudden avoiding action, or simply when over-doing things on a tight round-about or bend.

We are not alone in our findings. The DoE's Transport and Road Research Laboratory has published a paper on the phenomenon, its suggestion for remedial action being to bolt skids on to the car's forward lower chassis members.

Braking, too, leaves a lot to be desired. Our chart shows reasonable progression, if a little on the heavy side, up to a mediocre best-stop of 85%. What the chart cannot illustrate, however, is the violent brake tremor experienced in the test car, and its tendency to slew to one side under hard braking. If our Robin was typical, we can imagine some owners losing control while braking on wet roads.

DRIVE's checklist summarises the Robin's minimal provision of secondary safety features. Points that particularly worried our testers were the absence of anti-tip latches on the front seats and the spiteful-looking ignition key's siting directly above the driver's knee.

How much

There's one saving that's unique to the world of 'tricycle' motor-

ing, as the DVLC calls it, for the Robin's road tax costs a mere £20. Another convincing argument in favour of three-wheeling is fuel consumption: the only petrol-driven rivals that can better the Reliant's 45mpg overall are the two-cylinder Fiats and Citroens—and some might say that's not a fair comparison, considering their relatively snail's-pace performance. It's only on short journeys around town, or belting along the motorway, that the Robin does worse than 40mpg, and economy-minded drivers could achieve 60mpg.

General running costs are low, too, and the reason's easily seen in our list of main parts prices. Mind you, the Robin's not the sort of car that we would look forward to servicing on our day off. Its engineering is straight-forward-enough—it's just that access to the tiny engine bay is so awkward. And, while we're on the subject of access, imagine yourself checking the front tyre's pressure, let alone *changing* it.

One big problem of small companies and limited production runs is keeping prices competitive, and, for the same sort of money as the Super Robin estate, you can buy a hatchback supermini such as the Ford Fiesta. Reliant's mechanically similar four-wheeled Kitten is only some £20 dearer—about the price of a wheel and tyre, nowadays.

Verdict

DRIVE's testers admit that they didn't relish the prospect of 1000 miles of three-wheeler test driving, so it's to the Robin's credit that they quickly fell for the charm of this willing little car. True, it's noisy and apparently scaled for Lilliputians; but it's also fast and economical—two virtues that few can afford to overlook.

Our testers were also sufficiently skilled to regard the Robin's test-track behaviour as . . . 'interesting'. The snag is that DRIVE cannot honestly recommend any car that is so unsafe at the limit of its handling, and so lacking in secondary safety features, for use by laymen on public roads.



DRIVE's yellow Robin did too much bobbin'—not to mention weavin'—to appeal to our amateur drivers.

Claire Parker gave it a pasting: 'I don't like it, and I can't imagine why anyone buys it. I couldn't think of it as a proper car. I have never been in an invalid carriage, but it reminded me of one.'

'On the motorway, I did 50mph and didn't dare go any faster—I wouldn't dream of doing 70mph in it. Other drivers kept taking advantage of me and cutting me up. You could almost hear them saying: "Grotty little three-wheeler—get out of my way!"'

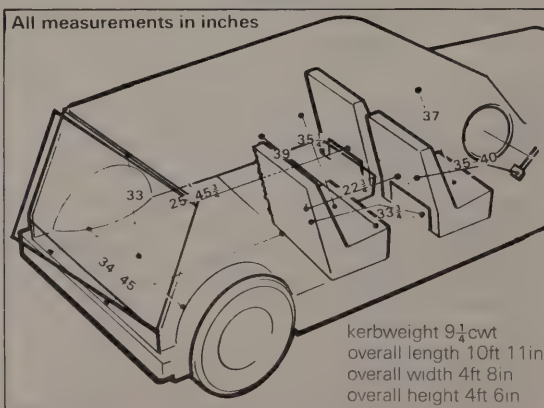
Air-traffic controller Ron Daly was more adventurous: 'It was noisy at 70mph, and I wasn't happy—let's put it that way. I thought that, if a coach passed me, its wake would blow me away.'

'I admit that it went very well in a straight line, considering the engine's size; but at speed, the ride is really harsh. The driving position was very nice—much better than it looks when you open the door. It's like a little cockpit. But, if I had to drive it more than 10 miles, I'd go deaf. I've tried to imagine the sort of person who would buy one—but I can't.'

Builder Fred Pocock came to the Robin's rescue: 'I found it surprisingly comfortable—like sitting in the cabin of a plane. It was quite an exciting feeling. I found the controls handy, and the steering was good—sporty, in fact.'

'I liked the gear change—it was sporty, too—and I wasn't too offended by the roar of the engine. The performance was exceptional. I was amazed, in fact. Within 200yd, I was doing 40mph; but by 70mph the noise is terrible. That's as fast as I dared to go. But it's cheap, and if it was all that I could afford, then I'd be prepared to go along with all the problems in order to have a *new* car.'

DRIVE car-tester Peter Denayer replies: 'Fred has shrewdly put his finger on the Robin's charm—and snags. The trouble is that it isn't cheap to buy, and poor accessibility to the works could mean expensive maintenance.'



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An ordinary tyre

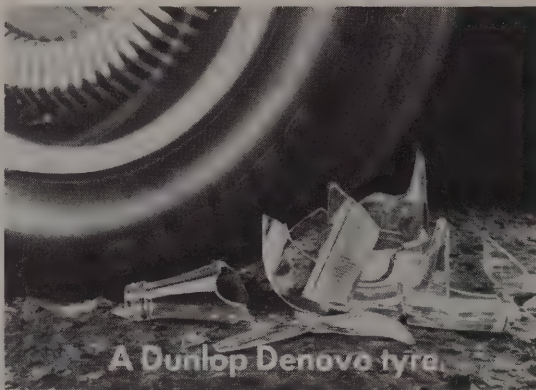
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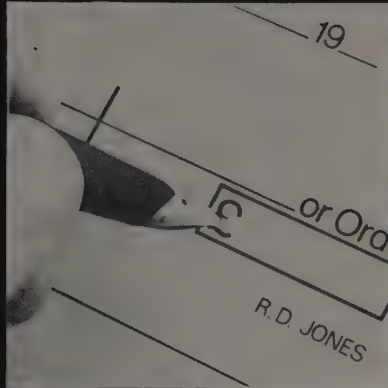
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Membership No. (or write non-member)

Occupation

Employer's business

When would you like cover to commence? day month year

On that date (a) How old will you be?

(b) How long will you have been resident in the UK?

(c) How long will you have held a full UK driving licence?

(d) How many years No Claim Discount will you have earned in your own right?

Name of your present Insurance Company

Make and model of car including details of modifications

Engine cc Year of manufacture 19 Value £

When do you use your car? *Please delete the word that does not apply

In addition to private use, will the car be used for:

(a) Driving to work on three or more days a week? YES/NO

If yes, name city, town or suburb where you work

Is your place of work more than 10 miles from your home? YES/NO

(b) Business use by yourself only? YES/NO

(c) Business use by any other person? YES/NO

(d) Commercial travelling? YES/NO

(e) What is your estimated annual mileage? miles

Have you or any other person who will drive this car

(a) Been convicted of any driving offence other than parking? YES/NO

(b) Been involved in any accident in the last five years? YES/NO

(c) Suffer from any physical disability or infirmity e.g. heart disease etc? YES/NO

If you have answered yes to 'a', 'b' or 'c' please give details on separate sheet.

Please indicate (✓) who will drive the vehicle:

(a) Yourself only

(b) Yourself and wife/husband only

(c) Yourself and one named driver only

(d) Any licensed driver

In the case of (b) and (c) please give details of other driver

or in the case of (d) details of youngest known driver Age

Length full UK Driving Licence held?

What cover do you want?

Please tick the type of cover you require:

Comprehensive Third Party Fire & Theft Third Party Only

Do you wish to reduce the premium by bearing up to £25, £35 or £50 of the cost of any damage to your car?

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AA Insurance Services

THE SUPER-MINI market is where today's fiercest battles are being fought, and the public benefits from every skirmish that produces keener-priced, more-sophisticated small cars.

It's a motoring revolution that began in 1959 with the Mini, BL's original. Tiny transport had always been a temptation for car makers, but, before the Mini, the baby Austins, Topolino Fiats and bubble cars had been just gleams in car designers' eyes. What made the Mini such a success was that . . . it was a success. It was A Different Kind of Motoring.

For most of the next decade, the mighty Mini reigned supreme, beating back the Hillman Imp and Fiat 500 competition with contemptuous ease. Then came Part Two of the revolution—the Continental super-minis. First to Britain was the Fiat 127. Hot on its heels was the chic Renault 5 hatchback. And where the Renault excelled was in the ride department, carrying passengers along on a 'magic carpet', still able to listen to the radio at 70mph, and proving, after all these years, that you don't need a long wheelbase to achieve ride comfort.

It is, in DRIVE's view, this feature that makes the Renault 5 as covetable now as in 1972. For not everyone enjoys the quicksilver response and firmer rides of Ford Fiestas and VW Polos. In any case, time has not stood still at La Regie, and today's 5TL gives an impressive 9mpg improvement over earlier models—important in these mpg-conscious times.

DRIVE decided, with the help of Computacar, the London-based used-car directory service, to give two would-be Renault 5 buyers a hand, to find out what £1000 would buy . . .

IRISH-BORN Janice Ludlow is 24 years old and works as a training analyst for a construction company. Until DRIVE arrived, she was banking on a friend in the motor trade—'hoping and praying for a miracle, that he would ring to say he'd found "my" car. I dreaded the prospect of rogue garages.'

This was to be Janice's first car, and she had studied rivals from Datsun and Fiat, not to mention the Mini. But what clinched it for Renault was the fact that Janice's mother was already a contented owner. Thus, Janice planned her tour of inspection; DRIVE sent AA engineer Bernard Tasker along with *expert* advice . . .

First call was to a private house in Twickenham, Middlesex, to see a pale-blue 1974 5TL with 42,000 miles clocked up and a price of £1050; the owner said that he had a friend in Renault UK who had been able to get him his new 14 at well below list-price.

AA opinion

What let down this first car was its bodywork. The carpets were wet, and rust was bleeding from several weld lines, including those to the rear of the roof. Tasker deduced that the paint had been

SAVE IT The Famous Five

'improved' with the aid of an aerosol spray without first preparing the surface: it now needed a complete respray. Mechanically, it didn't seem too bad, but the engine was clattery, which could indicate an expensive timing-chain repair, and a knock from the rear was probably a worn shock absorber.

Not a car to be recommended . . .

Janice set off for a small used-car dealer on London's South Circular Road, to inspect a 1973 model with 56,000 miles clocked up, priced at £1095. She said that it was more than she could afford, but perhaps she could beat down the dealer as no part-exchange was involved.

She was right. 'You hear so many bad things about garages, particularly small ones,' she said, 'but the salesman couldn't have been more helpful. He agreed to drop the price to £1025, provided he didn't have to touch-up the bodywork. But later, when I decided that this was the one I *would* buy, the salesman even relented on that. Not wanting to lose it, I told him that we had more to look at, but this was the best so far. He agreed to hold the car until the end of the day.'

AA opinion

The vehicle was generally clean, and the body was marred only by a damaged off-side rear panel. On the road, it drove nicely. Tasker noted severe oil-fouling on the engine, but couldn't find the source of the leak. Valve gear was noisy—a simple job to rectify.

What did worry our man was a small amount of damage at the front of the chassis: the nearside front end had been in a crash and, although the repair looked good enough, weld lines behind the headlamp and inner wing needed further attention. Tasker recommended a thorough underbody examination.

However, Janice was keen to buy, and could only just be persuaded to make one more effort. This time, it was to look at a green TL version with an L-registration and a £995 price-tag in a

Tooting garage. It also had the day's top mileage—72,000.

Janice was quick to notice a strong smell of paint around the car, and diagnosed a quick spray-job. She commented: 'The trim was in a disgusting state—a sign, I dare say, of the car's true condition. It was damp inside, and, when the AA man started the engine, it refused to fire on all cylinders. I think that could have been serious . . .'

AA opinion

This car looked very tatty, with evidence of poor body repairs and paintwork. Since more of the garage's cars were being 'painted' in an adjacent side-street, using aerosol cans on a windy day, the finish on the Renault didn't surprise Bernard Tasker.

The carpets were wet, and the exhaust pipe was broken and crudely repaired. When the engine started, it ran on only three cylinders. Said Tasker: 'I had seen enough of this tatty garage and its cars.'

Janice Ludlow went back to the South Circular and found that the other dealer was as good as his word; the price came down, and the repairs were done.

Tony Harding, from Locks Heath, Hampshire, is 24 years old and works for the Post Office. Last year, his employers taught him to drive and provided him with a van for weekday-use. It gave Tony the driving bug, and he started looking for a £1000 car. He soon narrowed the field to a Renault 5—and widened his price.

DRIVE and Tasker joined forces with Tony, and the hunt for a 5 was on in Southampton.

First stop was at a private address to examine a white 1974 model with 35,000 miles recorded, priced at £1240. The car belonged to a Greek student who had to return home for military service. Tony was smitten at first glance, partly, he admitted, because the 'go faster' stripes on the car made it *look* special. He put down the damp interior to 'condensation' . . .

AA opinion

The car had been repainted and, although clean, the finish lacked lustre and depth. Masking had been carelessly done, leaving over-spray in places. Mechanically, it seemed sound, apart from noisy tappets; but the footbrake had to be pushed a long way before anything happened. It also needed a major service, which would cost £50.

Bernard Tasker's real worry was the wet floor. But, if it was the windscreen that leaked, it could be easily mended.

The owner maintained that he hadn't noticed the water leak. The paintwork? 'Oh yes, it has just been repainted by my friend . . . because it was dirty.'

A mile down the road was a Renault dealer, and Tony and the AA's man



popped in 'on spec'. The only Renault 5 for sale was a 1977 model priced at £2045—too much for Tony. Tasker, however, spotted wing damage . . . and a wet floor.

Next stop was an out-of-the-way dealer who had an N-registered—1975—car at £1295 with 56,000 miles clocked up. Tony noticed how the salesman stressed the car's recent MoT certificate . . . and couldn't have missed *the wet floor*.

AA opinion

The dealer was a jovial lad, trading from

a run-down caravan, and he tried hard. The interior was very wet indeed, but the salesman tried to tell Tony that his cleaner must have been 'over-enthusiastic'.

'To our surprise,' said Tony, 'he let us road test the car without coming along for the ride, and, in fact, the road test didn't show up anything apart from a slight steering pull and noisy brakes. A sunvisor was missing, and the driver's seat was worn.'

Tasker reckoned £100 would cover a needed service and paintwork repairs;

but at least here was a 'genuine' car with nothing to hide.

Tony thought about how his money should go, and plumped for the 'genuine' car. 'Cure the faults and reduce the price to £1240, and I'll buy.'

When he collected the car it had a new MoT certificate, but none of the faults had been attended to.

But how, with faulty brakes, a broken screenwash, only one headlamp working and no numberplate lights, did it ever pass the Ministry test?

ROBERT OXFORD

SECONDHAND REVIEW SPOT CHECKS: RENAULT 5 SERIES

Bodywork Soundly constructed, with good anti-rust protection, but older models have several rust-prone areas: check inside tops of front wings, where screen pillars meet wings; look along edge of tailgate and on inside face of tailgate itself (especially L- and M-registered models); examine rear wings where they meet the lower sills ahead of rear wheels; behind and below wheel-spray areas; around door push buttons; and at hub-cap fixings. Early models had water leaks through window seals, running down doors and on to floor—check under floor covering for dampness and rust. Check operation of door locks.

Engine Tough, reliable unit, good for about 80,000 miles before major surgery—usually starting at valve gear—but it's a simple motor to repair. Check all round

for oil leaks, and look particularly for oil in the coolant expansion reservoir—sign of defective cylinder-head gasket. Silencer and downpipe under nearside front wing bombarded by road dirt from the front wheel—check for corrosion; also ensure that exhaust-manifold nuts have not worked loose. Carburettor on later models is sealed and 'tamperproof': flat-spots or adjustment merit professional help; complete servicing or replacement may be required. Alternator and water-pump drive-belts are fiddly to renew. Check that heater water valve moves freely—early versions corroded and seized.

Transmission Damaged rubber gaiters can cause premature wear in otherwise-reliable driveshafts. Knocks or clicks on full lock or on/off accelerator action indicate worn units due for replacement.

Clutch thrust race can become noisy and need renewing at 40,000 miles or so, and the floor-mounted gear change (from August 1974 on) may be sloppy from wear.

Suspension/tyres Expect considerable body roll on brisk cornering, but it should be well controlled. Rear rattles could mean worn dampers: inspect the rubber mounts where the dampers attach to body; also examine for fluid leaks. Bounce-test the dampers at each corner of the body—car should settle after 1½ bounces. Provided car is cornered with respect, tyres can last 40,000 miles.

Brakes Examine front discs for score marks and, if possible, check pad thickness—they tend to wear quickly and squeal. Excessive pedal travel may indicate pad and lining wear, but can also be due to leaking

master cylinder—check fluid level. Examine flexible hoses for wear or splits, but copper pipes should be sound.

Steering Heavy steering and considerable cornering 'fight' at speed are normal; rubbery feel could be worn track-rod ends or incorrect steering geometry, also betrayed by uneven tyre wear. Free play at the steering wheel may be knuckle-joint wear—two-thirds of way down column. Rock-test the wheels for bearing slackness and examine the steering-rack gaiters for any damage that will allow road-dirt and water to enter.

Electrics Test front indicators, side and rear lamps: these are vulnerable to poor earth connections. Ignition-switch action should be smooth and free, but early switches tended to jam.

BARRY FRANCIS

Under the bonnet of the new Marina is a reliable 1700cc overhead cam engine. It will take you and the family 30 miles on a mere gallon of petrol in comfort. (The 1300 version delivers even more.)

But whilst you're clocking up the miles, you won't be clocking up expensive repair and servicing bills. The new Marinas are economical and reliable. And the high level of trim across the range makes Marinas better value than ever.

The seats, dash and controls have all been re-designed. There are twin driving lamps and one-piece door glass for a cleaner look. The rear cluster includes fog guard lamps.

IT DOES WHAT A CAR SHOULD.



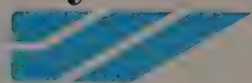
30mpg.

Under the bonnet of the new Marina is a powerful 1700cc overhead cam engine. It will take you from 0-60 mph in a mere 12.2 seconds*-a figure many more expensive cars would find hard to beat.

A front end spoiler reduces drag and improves high speed stability. And power assisted front disc brakes stop you fast.

There are 11 Marinas—from the 1300cc **Marina. Twice the car for your money.** 2-door at £3183, to the 1700L Estate at £4291. So if you want a fast car or an economical car, test drive both...the new Marina.

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*Motor November 1978

IT DOES WHAT A CAR SHOULDN'T.



98mph.

SAVE
IT

DR PETER BURSTYN, a 36-year-old physiology lecturer at Southampton University, knows more about engines than most people, and he's a fan of diesels. He loves their noise, their smell and their debatable character—as do two members of the DRIVE car-test team. And, like them, he has just become the owner of a Volkswagen Golf LD—a car that has received rave reviews from the rest of the motoring press.

Dr Burstyn had to wait several months for his Golf diesel, and then, despite demands for a red one, was offered a take-it-or-leave-it choice of white. 'I grabbed it to beat the increase in VAT,' he told us.

'In recent weeks, I've done hardly any driving, partly because I have been running a diesel Land-Rover; it's a pain to drive long distances, as it's noisy and slow. But I'll be driving much more now that I have a faster, more-comfortable and certainly much quieter car.

'I never drive to work—I cycle—so most of my driving is medium- to long-distance. Unless it is bucketing with rain, I won't drive less than three miles. I agree that I don't really do enough miles yet to justify the extra cost of a diesel engine; but what about tomorrow's fuel prices?

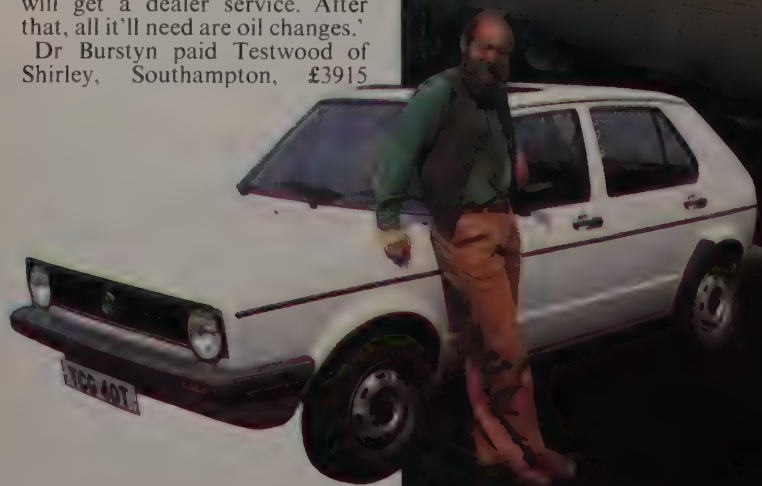
'Three months ago, when the car was on order, my colleagues said that I was dotty and that it would take me 10 years to get my money back. But fuel costs are rocketing, and there's so much more to come. At £1.30 a gallon, diesel makes sense even for the low-mileage driver.

'I've owned a diesel-engined vehicle for quite a long time (the diesel Land-Rover for nine years), and I like the no-maintenance bit. For its first year, the Golf will get a dealer service. After that, all it'll need are oil changes.'

Dr Burstyn paid Testwood of Shirley, Southampton, £3915

Diesel Golf: future tense?

'What about tomorrow's fuel prices?' says Dr Peter Burstyn. Fortunately, he can face the future with confidence in his new diesel Volkswagen Golf LD—it has just joined DRIVE's Long Term Test Club with a clean bill of health



Long
term
test club

for his VW Golf LD, including road tax and delivery charges. A sunroof added £148 to the list price, and halogen headlamps cost £14 for two home-fitted bulbs; but, with Volkswagen's six-year rust warranty, he turned down a £60 underbody protection deal. He also replaced the VW's slim Continental tyres with fatter 165-Series Michelins—an intriguing decision.

'The speedometer, I heard, is reading 5% high on these cars,' he explained, 'and the tyre change will bring it back to precision. Also, after having had a Land-Rover, I tend to be a bit cavalier about off-road driving, and it's too much to expect a careless driver like me to change his ways. The Michelins give me an extra ½ in ground clearance.'

Dr Burstyn arrived at DRIVE with a smug smile on his face. After 400 miles, a brim-to-brim fuel tank check showed that he was averaging 58.5mpg.

'I buy all my fuel at a local lorry park, where it's 8p a gallon less than anywhere else. So far, I've only filled up once, and a man ran out shouting: "Stop, stop! It's—it's diesel!" The garage, by the way, had a sign saying: "Fuel Shortage. Maximum 30 gallons." That sort of shortage I can live with...

'The only problem is that the Golf isn't *enough* like a diesel. It's the low-speed torque that I miss after the Land-Rover.'

At the first, delivery check, our AA engineer found only one serious fault—leaking fuel from a porous, flexible pipe. The tank needed draining to sort that one out. Tyre pressures were set too high (at 30psi, instead of 24psi all round), and gave the car a hard ride. The oil level needed topping up, and underbody protection should not have been sprayed on to the exhaust pipe...

Nevertheless, our engineer was impressed. He concluded: 'The car—apart from the tyre pressures—had been correctly prepared before delivery. On the road, it is light and easy—a pleasure to drive.'

Toyota Celica: past perfect

Meanwhile, after a year of close scrutiny by our experts, the Club says farewell to a trouble-free Toyota

JOHN HOLLOWAY, 40-year-old director of a company producing films for industry, is a motorist who *enjoys* a boring life when it comes to cars. Time after time, DRIVE's engineers got to grips with his Toyota Celica XT2000, and John's smile became broader as his belief in Japanese reliability was confirmed.

John collected EGO 595T in August 1978, after a three-month wait for the colour of his choice—metallic black. His colour prejudice cost him an extra £250 when a price rise pushed the Toyota to £5100, but the car still looked a bargain to him, with an automatic gearbox and air-conditioning to complement all the other 'standard extras' so often found on Japanese cars.

At the post-delivery inspection, AA engineer Chris Warwick was almost as enthusiastic about the car as the proud new owner. 'Everything *feels* as though it is going to work,' he said. 'There is no rust anywhere, apart from a few speckles behind the bumpers and on their brackets. It's certainly the best of the long-term cars I've inspected so far.'

Warwick quickly attended to the driver's inertia-reel seatbelt that didn't lock up, and took a 'wait and see' attitude to the stiff tailgate. He found a loose screw on the centre console, and was not all that impressed by the way the garage supplier in Tooting, south London, had fitted the mudflaps. He also pounced on an oil leak from the steering box. On the road, Warwick commented on the familiar vagueness around the straight-ahead position—normal for cars using a recirculating-ball steering system.

We started to worry about John

as business kept him pinned down, and a mileage of only 4032 was clocked up, before our next inspection of the car. But there was no need for concern. Again, Warwick admitted: 'Very few points worthy of comment, which is not surprising in view of the car's condition on delivery.'

But Warwick was determined to find *something*. In the end, there were: indications of minor coolant loss from the base of the radiator; slight noise from the valve-operating mechanism; and, attempting to remove the front wheels to check the brake pads, he pronounced—almost triumphantly—that the wheels were 'rusted' on to the hubs. This last problem, Warwick thought, had occurred in transit from Japan.

John Holloway was visibly relieved. 'It is a bit boring, isn't it,' he gloated. 'The seatbelt hasn't given any trouble since you fixed it, but it took a fair time to run everything in, and the wheel-trims should be better designed—they protrude ½ in beyond the tyres, so I knock and bend them.'

'Only worry has been warm-up: the temperature gauge climbs all the way up before dropping back to normal.'

Two months and 2400 miles later, John Holloway was still Britain's happiest owner. AA engineer Bernard Tasker, standing in for Warwick, declared: 'The Toyota is in excellent order and there are few criticisms I can make.' He noted that the engine performed well and idled smoothly, but that the valve gear was still a little noisy. Ignition timing and dwell angle were spot-on. On the rust front, the bumpers were suffering—particularly that at the rear. The steering box was oil-

fouled, probably due to spillage.

On the road, our man noticed slight steering bias to the left, and the now-familiar vagueness in the straight-ahead position. He also noted a judder when the brakes were used at speed.

Our detective added: 'The rear screen has been renewed. The installation is satisfactory, except for the lower-right section of the brightwork trim—untidily fitted.'

John confirmed: 'I just closed the back door and the window fell in. The garage replaced it and I didn't get a bill... It gave me quite a shock, and I just missed a downpour by the skin of my teeth.'

Tasker was puzzled by the 'overheating' problem, saying: 'It could be due to a "lazy" thermostat, but I wouldn't expect it to be related to low ambient temperatures. I queried the antifreeze strength, and, when checked, it was weak—18%—which could lead to coolant "mushing". If this happened when the thermostat opened, the passage would be restricted for a short time, resulting in overheating. The antifreeze strength should be stepped up...'

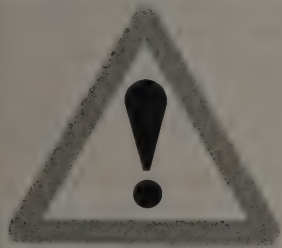
DRIVE tried to give John his money's worth at the final check in May at 8557 miles, but it was all still almost too good to be true. Even the steering box was oil-free, ruling out the possibility of a slight leak there. When we put the vehicle on our rolling road to check the speedometer, we found that it was reading fast by almost 4%, but we've seen many worse than that.

John told us that he had upped the antifreeze strength, but it had failed to cure the overheating problem. Tasker commented: 'Now that the weather has improved, he will have to wait until next winter to see how this develops. Nonetheless, he should ask the garage to fit a new thermostat at the next service.'

John's fuel consumption has been constantly around 21mpg—the sign of a man in a hurry.

He was still smiling as he sped off...

ROBERT OXFORD



WHAT'S NEW

Red alert

AFTER WHAT is probably the most detailed field-study ever to be undertaken in Europe into vehicle corrosion and its prevention, Ford is introducing new manu-

facturing processes specifically designed to protect bodywork.

To determine exactly how serious corrosion can be, a team of Ford inspectors, working in 13 different countries, from the north of Scandinavia to the southern tip of Italy, examined nearly 4500 cars of all makes.

Putting theory into practice, accelerated corrosion tests were carried out at a test facility built at the Ford proving ground near Lommel, in Belgium.

As a result of this research programme, four new stages have been introduced into the 1980 Ford paint and finishing system, to supplement the five used previously. The nine stages are:

1 Zinc phosphating—for a sound

paint bond to the metal bodywork

2 NEW HIGH-PRESSURE FLUSHING—to remove any phosphate residues left in closed box sections

3 Electrocoating—full submersion of positively charged body in negatively charged paint bath

4 Primer—epoxy-resin spray coat, oven-dried

5 NEW ANTI-STONE CHIP PVC UNDERCOAT—previously applied only to wheelarches. The new process extends under door sills and behind the rear wheels. It is hand-brushed out to the edges of the wheelarch, where the spray gun cannot reach

6 Final finish—primed surface is given a light, abrasive rub and filled where necessary. After the colour coat has been baked on, it

is inspected for imperfections and retreated if necessary

7 NEW CAVITY WAX INJECTION—sprays a layer of water-repellant wax from special probes into all box sections and areas where moisture might be trapped. The holes in the sills are then sealed

8 Rigid polyurethane foam injection—on certain models this is injected into the side pockets of the boot, where it expands and hardens as closed-cell foam

9 NEW UNDERBODY WAX COATING—applied after the car has been fully assembled. This tough wax protects the mechanical components, as well as the body, from the effects of winter salt sprays. Sounds good... but not before time, Ford.

BARRY FRANCIS

Views to air? Tell DRIVE about your motoring and what it means to you. You can send letters for publication — unstamped — via DRIVE Directory, FREE-POST, AA, Basingstoke, Hampshire RG21 2EA

Waxing indignant

In your article on the hidden costs of buying a new car (May-June), there is no mention of the amount a garage charges for preparing the vehicle for delivery. I have just purchased a Ford Fiesta 950L, and was surprised to find this item charged at £21.50 on the sales invoice, as well as all the other extras.

As this extra had not been mentioned before, I queried it with the salesman, only to be told that it was quite normal. But it's the first time that I've ever been asked to pay for the removal of factory-applied protective wax coating.

Mrs Isobel Scott-Mills
Shrewsbury, Salop

We were surprised, too, Mrs Mills. Ford tells us that the charge is NOT normal. In fact, in a letter from Ford last September, dealers were told in no uncertain terms

that the cost of de-waxing, cleaning and preparing vehicles, together with the cost of the work listed in the pre-delivery inspection schedule, is incorporated in the profit on each vehicle. No charge for this work should be made to customers, and we suggest that sufferers address complaints to the dealer concerned, with a copy of their letter to the car-sales director at Ford.—Editor

No accounting

In these frustrating times of fuel shortages, surely we should all pull together—even if it means making-do with less for the common good? And that means making-do equally.

Recently, I waited patiently at the pumps while a garage attendant dispensed just over 9½gal into the car ahead of me—until the tank overflowed, in fact. Being practically empty, I asked for 4gal (barely half a tankful), only to be told: 'Sorry, there's a £2 limit.' When I pointed in amazement to the car in front, I was told that its driver was an account customer, and that was all right.

Are we all in the energy crisis together, or not? Maybe we need some kind of official policy—without rationing—to ensure that

we do all work together to get this country through.

J D Gilchrist
Tadley, Hants

Tax deductible

Your lowdown on the hidden costs of car-buying needed pointing out, but may I disagree on one point? Road tax is so variable in amount that I should prefer to regard it, like insurance, as compulsory but the responsibility of the owner, rather than an 'obligatory extra' on the price of a new car.

What would Satra Motors do, for example, if a disabled person bought one of its Ladas? The disabled are exempted from paying the £50 annual tax, yet it is included in the all-in price of this particular car.

Dr Keith E Jolles
Birmingham

According to Satra Motors, its dealership would subtract the cost of the road tax in such a case.—Editor

Snap judgement

Why didn't you take your camera along to the nearest traffic lights or busy road junction? You would have found male-driver aggressors ready-made, without having to pay a woman model to feign

anger on your May-June cover.

The ratio of angry men to angry women must be in the order of 9-1. So you should have at least published on the centre pages a photograph of a male with bulging eyes, veined forehead, suffused features, gnashing teeth, etc. That sight would surely have made your cameraman duck behind the nearest No Waiting sign!

Mrs Lambert
Branston
Burton upon Trent, Staffs

Japanese collections

One Datsun dealer quoted me a delivery charge of £80, and £12 for numberplates. Thinking that this was a bit much, I contacted another Datsun dealer, 15 miles away. His quote: £55 for delivery, £7.50 for the plates. It pays to shop around.

E H Siderfin
Cricklade
Swindon, Wilts

University challenge

I was staggered that you thought anyone who bettered a score of 42 in your Highway Code quiz (DRIVE May-June) could consider themselves to be in the 'driving examiner' class. My wife and I scored 57 out of the possible 60, and I thought it was

MOTORCYCLE TESTS

► continued from page 15

rear brake through the foot lever. Braking power is balanced by the simple method of equipping the rear wheel with a smaller disc that allows only 25% braking power to reach the wheel.

The right-side front brake is something of an auxiliary unit, best kept for ultra-low-speed manoeuvring and ultra-high-speed emergencies. At all other times, the foot-operated system gives exemplary braking under all conditions, stopping the G5 with straight-line stability, unlike the independent systems of rival makers. No anti-wheel-lock system is incorporated, but, even in wet weather, only a hare-brained rider or a brave tester could cause the rear wheel to lock.

Both frame and suspension behave impeccably, too, whether on country lanes, cobbled backstreets or the fastest closed-circuit test track. The result is a motorcycle that riders learn to trust implicitly—and that is rare in the two-wheeled world. DRIVE's test G5 cornered in perfect safety on an imperfect track, at speeds so high that its footrests grounded hard. If its angle of cornering were not thus limited, speeds could have been ever higher. (We do not advise riders to try this on public roads; it is simply an indication of the machine's safety.) Comfort could not be better,

either. The dual seat is long enough for the largest rider and passenger, wide enough for the most ample *derriere*, firm enough for the heaviest human, and offers scope for a shift of riding position on long runs. With footrests and handlebars that are carefully arranged, a clutch that's light to operate and a gear change that's slick and positive, rider and machine can achieve near-perfect correlation. As one of the testers said: 'It's as though the G5 had been designed and built by experienced motorcyclists'—not as obvious as it sounds, sadly.

Not quite everything reaches perfection. The headlamp's beam is dim and narrow, and the numerous 'idiot' warning lamps on the instrument panel are unreadable during daylight hours. Switchgear does not appear to be robustly constructed, but it functions well and has been in production for many years with no signs of major defect.

For the experienced motorcyclist who wants practicality in all things, fine DIY characteristics, unparalleled safety and scintillating performance (albeit without the silky sophistication of the Japanese), the G5 is just the ticket to ride. But owners must be prepared to modify any of the several minor inconveniences mentioned to make this Moto Guzzi a totally satisfying cruiser.

DAVE MINTON

REMEMBER WHEN PROMENADE DES ANGLAIS HAD EVERYTHING EXCEPT A NEW LUXURY HOTEL?

Now this world-famous boulevard has the lively new Hyatt Regency Nice. A sybarite's hotel, with its face turned to the sea, its roof-top pool warmed by the southern sun, and its private terraces caressed by Mediterranean breezes. With 355 rooms, gourmet restaurant, sauna and massage, and most convenient indoor parking. Definitely Nice's nicest and newest!

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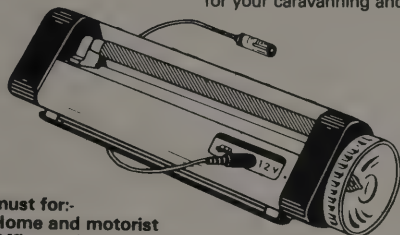
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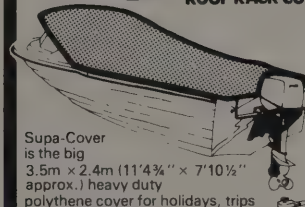
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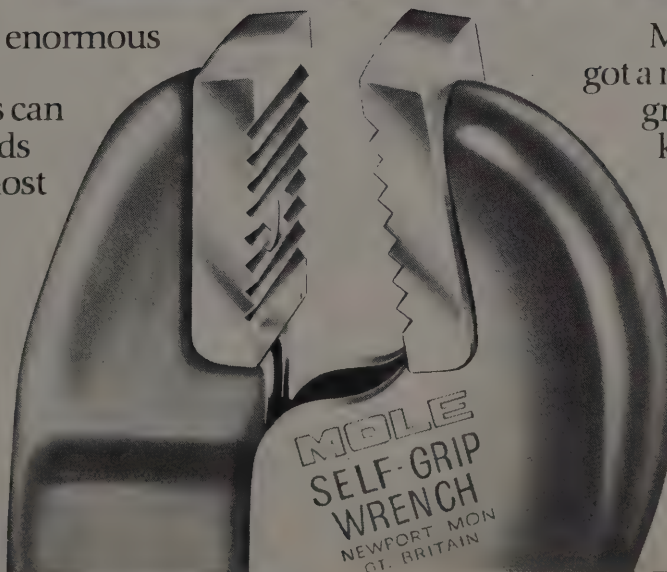
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bad getting one question wrong. We are both under 25, which means that we must pay over the odds for motor insurance. Yet you report that more than half of all motorists recently tested on the ccde were ignorant of speed limits. Perhaps we youngsters aren't quite as dangerous as people think.

Tony Pitt
St John's College
Cambridge

Treading wary

In the May-June issue, you comment to one of your correspondents that a nine-year-old tyre is likely to have deteriorated from age, if not wear. Your readers may be interested to know of a perfect example of this on my 1970 Ford Escort estate, fitted with Michelin X tyres and with just over 80,000 miles on the speedometer.

Until recently, the two rear tyres, which had 2mm and 2½mm of tread remaining, were part of the set of five fitted when the car was new. For the last two or three months, a slight rear-end horizontal oscillation has been noticeable, particularly at low speed and even more so when the car was loaded in the back. After checking and finding

nothing mechanically wrong, I swapped the 2mm tyre with the new spare, and immediately the problem ceased. I concluded that deterioration through age was the cause, and promptly pensioned off both old originals.

P J Cannell
Letchworth
Herts
See Tyres Special, page 43.

All shapes

You pinpoint a few home-truths in your article on car seats (May-June). Certainly, the driver's seat in my Morris Marina is inadequate in almost every way—too soft, too short in the squab, too low down.

When I acquired the car, I complained and was assured that the dealer's workshop could alter it. They tried, and failed to make any improvement. When I telephoned BL, I was told that the company received very few complaints on seating. As a commercial organisation, it went on, it was interested in expending time, research and money only on the issues that have prompted large postbags.

It may well be that people who complain about these things do not bother to buy BL cars, preferring Continental makes which,

in my experience, have better seat design.

A F Smallbone
London NW11

Testing...

In your otherwise excellent report on the Volkswagen Scirocco (DRIVE, May-June), you refer to VW's excellent underbody corrosion protection. It is worth pointing out that a whole host of new anti-corrosion measures have been incorporated into production since the date of your test, and that all new VWs and Audis sold in Europe since 7 March have been covered by a six-year anti-corrosion warranty.

This goes far beyond the warranty offered by any other manufacturer, and is not dependent on additional expensive re-treatment during the six-year period. Owners are, however, expected to have their cars inspected at two- and four-year intervals.

A D Hill
PR manager
VW-Audi
Milton Keynes

... testing

I was delighted to read your kind comments on the Fiat X1/9 1500 in the July-August issue, but must take you gently to task over the

warranty details that you mention.

Since 1 January, the Fiat Master-cover warranty scheme gives 24 months' cover in two stages: 12 months/unlimited mileage, followed by 12 months' cover for 'major units', with a 24,000-mile limit. The 24-month anti-corrosion warranty remains unaltered. Michael Thorold-Palmer
Public Relations, Fiat UK
Brentford

Opel fruits

In reply to Marcus Jacobson's item on diesel cars (May-June), I purchased an Opel Rekord diesel in April 1976, and, to date, the vehicle has covered 50,000 miles. Maintenance costs have been minimal, since nothing has been needed other than routine servicing. Overall mpg is 43.5.

Tests carried out with this vehicle on the motorway show that, at a steady 70mph, it returns 36mpg, while at 56mph, it returns 46mpg. Its only disadvantage is that you cannot make a 'racing' start, though this could be why the tyres have lasted so well!

I am satisfied with the car's performance in every respect. It is a pleasure to drive.

F Hague
Hull, N Humberside

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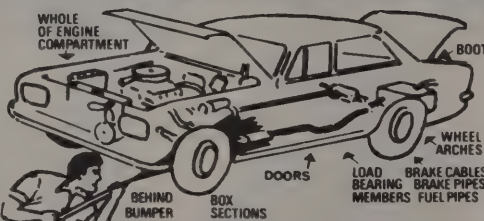
NO NEED TO CRAWL UNDER CAR (in most cases). Finnigan's Applicator forces airless spray into entire car underbody. **HEAVY COATING.** One gallon equivalent to THIRTY aerosols at one sixth of cost!

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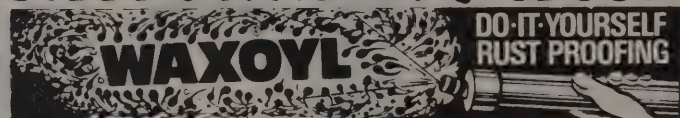
WHY BIG WORLD USERS TRUST WAXOYL RUSTPROOFING

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RUST GNAWS UPWARDS to metal surfaces, despite dedicated polishing. Factory NEW cars hide rust pinpoints within faulty seams, spot-welded joints. Assembly line rivets, bolts, crack paint on prefab panels. Rust air damp creeps through thinnest gaps. Grows, spreads, penetrates. Gnaws metal. Brush-on rust killers can't restore surface bubbles damage. Every inch of surface rust scraped and painted over still leaves devilish rust on the UNDER side. Hidden! And deep in-below corrosion weakens suspension, load-bearing members, brake cables, sills, box sections. The very vital spots that Waxoyl rustproofs for evermore! Lowers depreciation by at least £150 p.a.

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On the other hand, we still want to lead a normal social life – the odd drink at lunchtime, a little wine with a meal or a drink after work. But because alcohol affects different people in different ways depending on age, weight, sex, eating habits – even the time of day – it is impossible to say accurately what your 'limit' is. You need a way of telling instantly if you are over the limit instead of waiting for a policeman to tell you. And remember, every day over 400 people are breathalysed.

A speedometer tells you your speed and helps you to keep within the speed limit. Alcocheck, the revolutionary personal breath-tester tells you with total accuracy whether or not you are over the limit.

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Alcocheck is made in Sweden, the country with the most stringent drink-driving laws in Europe. It was designed in collaboration with scientists from the Department of Applied Electronics at the University of Lund in Sweden and independently tested and assessed as being entirely reliable by experts in Sweden, Germany, France and the UK.

Space Age Technology.

The space programme has made possible the rapid development of solid state technology and miniaturisation so that today you can carry in your pocket a piece of equipment as complex and precise as Alcocheck.

It works on the scientific principle that alcohol concentration in the breath is directly proportional to the blood-alcohol level. This is measured by changes in the conductance of a semi-conductor detector in proportion to the amount of alcohol falling on the surface. The circuitry incorporates a solid state TGS sensor which undergoes this change in electrical resistance when exposed to gases, such as alcohol, in breath. This change is converted into DC and indicated by the 'traffic lights' on the instrument panel.

In fact the system used in Alcocheck is so accurate that the days of the 'tube and balloon' breathalyser may soon be over. The need for instant and very accurate measurement means that there is a movement away from traditional methods to the instant read-out systems like Alcocheck. And whatever systems are adopted in the future you can be sure that Alcocheck will always tell you when you are over the limit, and enable you to save your licence, staying within the law and not driving.

So accurate, yet so simple to use.

Alcocheck is light and compact. It fits easily into your pocket or in the glove compartment of your car, and it's so accurate. Battery-powered, it's easy to use, and easy to read. You read it like a set of traffic lights. Red for don't drive, amber for warning and green for 'go.' Switch on and when ready two green lights show. Take a deep breath and blow steadily for 4-6 seconds into the Alcocheck.

A RED LIGHT means DO NOT DRIVE under any circumstances. You will be breaking the law, i.e. you have more than 80mg/100ml of alcohol in your blood.

A YELLOW LIGHT means do not drive, but retest at 15 minute intervals until the green light shows. You have 40-80mg/100ml.

A GREEN LIGHT means you can drive but be careful. You have less than 40mg/100ml in your blood. Alcocheck also incorporates a FAIL SAFE device that indicates when batteries need replacing.



It could save your life.

So if you want to be sure you're not breaking the law, use Alcocheck. . . and don't drive when it shows red or amber. It may be inconvenient to leave your car for a few hours, but it's a lot less inconvenient than leaving it for a year or more. And think of the cost of increased insurance premiums, or even losing your livelihood if you depend on a car in your work.

And remember, regardless of the legal limits, all alcohol increases the possibility of accidents. Also remember that a person's blood/alcohol level may continue to rise for some time after the last drink is taken, and repeat testing may be advisable. As the law stands, driving with 80mg/100ml of alcohol in your bloodstream is illegal and statistics have shown that at that level you are four times as likely to have an accident. Alcocheck can save your life or the lives of others. It can also save your licence.

Send for your Alcocheck today, it could save your life and your licence. Just fill in the coupon and send it to Asset. Allow 21-28 days for delivery.

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If you do not agree that this is a full and fair description of the product, or if you have any cause for dissatisfaction within twelve months of purchase, you should return the merchandise and we will refund the purchase price in full.



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USED-CAR PRICE GUIDE

Small pleasures

IT IS FAIRLY obvious that a small car costs less to buy and run than a larger one, but some folk still buy fuel-guzzlers, believing the extra costs to be more than offset by the extra smoothness of a big engine and the comfort of big, armchair seats . . . not to mention the status-symbol value.

What would it really 'cost' them to think small?

Take a look at the traditional American car, with a bonnet as suitable for staging a boxing match as for keeping rain off the V8 lump underneath. The boot is sized to match. In fact, the whole car may easily be 20ft long. But lift the lid and see how *shallow* the boot can be . . . and, inside, how passengers have so little legroom. Why, there's more space in a modern European car like an Austin Allegro.

Economies in space, like mounting the engine transversely to reduce the bonnet size, save weight as well as securing cheaper Channel crossings. Passengers benefit from not having to cope with a big transmission tunnel; and, with no differential at the back, the boot can be deeper.

DRIVE testers learned long ago not to judge how many chocolates are inside by measuring the *outside* of the box. Mostly, the public still has not caught on.

The tape measure cannot be wrong, and it is always instructive to learn how interior inches are won—and lost.

And anyway, a big seat can be less comfortable than a well-shaped small one, and will always take up space. But still motorists 'pay in space' to buy a top-of-the-range car—a Volkswagen Golf GLS, for example, simply because its fat seats look better than those in the LS version.

Refinement? No doubt a Jaguar owner does arrive at his destination less fatigued than a Ford Fiesta man; but the comfort-gap is narrowing. *Costwise*, the gap is widening all the time.

Meanwhile, check-out depreciation figures with the help of our price-listing of 100 of today's most popular secondhand cars. Specifications are compiled from AA roadtest reports, the reference numbers and dates of which are given.



MAKE AND MODEL	AA Road Test Report No	Date	engine cc	mean top mph	acceleration 0-60 in sec	overall mpg	insurance group	MODEL YEAR Average secondhand price guide								
								1979	1978	1977	1976	1975	1974	1973	1972	
Alfa Romeo Alfased 1.3ti	D5/78	3/4 78	1286	98	12.5	34.5	5	→	2725	—	—	—	—	—	—	—
Audi 80L	389	6/76	1297	91	14.2	31.75	5	→	3515*	2775	2230	1785	1390	1065	—	—
100LS	314/RI 139	1975	1761	100	12.7	29.25	5	→	4410	3715*	2405	2005	1635	1290	1040	—
Austin Morris Mini 850	340	5/74	848	73	26.1	41.0	1	1950	1715	1480	1270	1050	900	765	650	—
Mini Clubman saloon	410	1/77	1098	82	18.2	40.5	1/2	2375	2075	1785	1535*	1285	1090	940	795	—
Allegro 1300 Mk2 4-door	377	2/76	1275	85	19.0	37	2	2710	2405	2050	1745	—	—	—	—	—
Allegro 1500 estate	RI 127M	1975	1485	90	16.6	34.25	3	—	2790	2375	2010*	1695	—	—	—	—
Maxi 1750 Mk2	263	1/72	1748	90	14.6	28.75	3	3235	2825	2410	2035	1725	1435	1205	995	—
Princess 1800HL	397	8/76	1798	96	14.2	29.75	4	3740	3490*	2480	2130	1810	—	—	—	—
Princess 2200HL	RI 129N	1975	2227	105	12.7	26.5	4	—	3915*	2525	2130	1810	—	—	—	—
Marina Mk1 1800 4dr	295	1/73	1798	96	12.8	31.5	3	3030*	2610	2235	1905*	1610	1355	1140	950	—
MG Midget Mk3	205	2/70	1275	93	14.8	29.1	4	2775	2410	2070	1745	1465*	1235	1040	880	—
MGB Mk3	243	4/71	1798	105	11.8	23.9	6	3690	3345	2850	2405	2030	1685	1415	1190	—
BMW 520 i	327	12/73	1990	111	9.7	29.0	S/R	—	—	5695	4605	3715	2950	2330	—	—
Citroen 2CV6	RI 118	1975	602	66	37.2	44.0	1	1775	1465	1235	1040	880	—	—	—	—
Dyane 6	366	3/75	602	70	29.5	47.0	1	1900	1545	1290	1080	905	755	630	520	—
GS Club	384	5/76	1222	93	17.2	33.0	4	2575	2200	2005*	1490	1215	985	800	630	—
CX2000	416	5/77	1985	107	12.7	29.25	6/7	4755	3815	3120	2550	2180	—	—	—	—
CHRYSLER Sunbeam 1.6S	D6/78	3/4 78	1598	95	13.9	33.5	3	3280	2910	—	—	—	—	—	—	—
Avenger 1.3 2-door	337	4/74	1295	93	19.0	30.5	2	—	2445	2100	1510	1290	1100	940	—	—
Avenger 1.6GLS auto	339	5/74	1600	93	13.9	26.5	4	—	3120	2675	1935	1645	1355	1155*	—	—
Alpine S	381	4/76	1442	97	14.3	32.0	5	3555	3230	2805	2375	—	—	—	—	—
Hunter GL 4-door	234	1/71	1725	86.5	15.0	28.7	3	—	—	—	1755	1485	1240	1035	855	—
Colt Lancer 1400GL 4-door	371	11/76	1439	94	12.4	34.0	5	3185	2625	2205	1840	1515*	—	—	—	—
Datsun Cherry 100A 4-door	284	8/72	988	83	17.7	41.25	3	—	—	—	1580	1345	1135	965	810	—
120Y coupé	336	3/74	1171	86	17.7	39.0	4	→	2400	2080	1775	1505	1270	—	—	—
Violet 140J	RI 132M	1975	1428	94	15.5	32.0	4	2950	2545	2080	1765	1485	1230	—	—	—
Bluebird 180B	316	8/73	1770	104	12.3	27.0	5	—	—	2125	1810	1525	1280	1070	885	—
Fiat 126	334/RI 138	2/74	594	62	60.0	48.5	1	1710	1485	1275	995	850	725	615	—	—
127 3-door Special	RI 137M	1975	903	82	18.4	41.75	2	2475*	1925*	1780*	1400	1185*	—	—	—	—
128 4-door	320	4/73	1116	86	15.5	34.0	3	—	1975	1680*	1435	1210	1020	860	715	—
131 1600S	369	6/75	1585	94	13.6	32.0	5	3170	2955*	2310*	1955	1645	—	—	—	—
132 1800GLS	360	1/75	1756	102	12.0	25.0	6	—	—	—	1985	1625	1460*	1030	—	—
Ford Fiesta 1000HC	417	4/77	957	83	18.4	41.0	1	2260	2120	1925	—	—	—	—	—	—
Escort 1100 Popular	RI 136M	1/75	1097	77	23.6	35.0	1	2105	1990	1765	1515	1305	—	—	—	—
Escort 1300XL 4-door	292	11/72	1297	88	16.0	31.0	2	—	2690	2350	2025	1740*	1290	1100	940	—
Cortina Mk3 1600XL 4-door	323	10/73	1593	95	15.1	27.0	3	—	—	—	1960	1665	1415	1200	1005	—
Cortina 2000E estate	347/RI 116	19/71	1993	99	12.3	27.5	5	—	—	—	2495	2120	—	—	—	—
Cortina Mk4 1600	404	12/76	1593	89	15.3	27.0	3	—	2740	2515	—	—	—	—	—	—
Capri Mk2 1600GT	342	6/74	1593	102	12.4	27.5	5	—	3625*	2955	2545	2200	1895	—	—	—
Capri 3000 Ghia auto	RI 114	1974	2994	113	9.9	22.0	6/7	—	5100*	4290	3615	3045	2545	—	—	—
Granada 3000GXL auto	282	6/72	2994	108	11.7	21.0	6	—	6885*	4460	3590*	2355	1810	1340	920	—
Honda Civic 1200 3-door	362	3/75	1169	86	14.7	34.75	4	2570	2255	2015*	1640	1390	1170	—	—	—
Accord auto	420	5/77	1600	89	14.7	32.0	5/6	—	3460	2905	—	—	—	—	—	—
Jag/Ro/Tri Jaguar XJ6 4.2	227	10/70	4235	117	10.0	16.75	6/7	→	9555	7850	5920	4705	3640*	2355	1960	—
Jaguar XJ12 (L) auto	305	4/73	5343	136	7.6	13.0	7	→	9905	8195	6810*	4460	3590	2255	—	—
Rover 2200SC	324	11/73	2205	104	12.2	24.0	4	—	—	—	3515	2875	2380	1985	—	—
Rover 3500 auto	330	2/74	3528	112	11.1	20.5	5	—	—	—	3395	2725	2205	1735	1390	—
Rover 3500SDI manl	428	10/77	3528	119	10.4	24.5	6	6885	6015	5100	4410	—	—	—	—	—
Range Rover	252	7/71	3528	101	13.2	18.0	5	11435	10125	8640	7550	6340	5275	4410	3615	—
Triumph Toledo 4-door (Dolomite)	345/RI 150	1977	1296	83	19.8	33.0	2/3	2915	2635	2240	1895*	1440	1230	1050	895	—
Triumph Dolomite 1850	288	9/72	1854	100	11.4	28.25	4	4060	3345	2825	2500*	1935	1610	1340	1090	—
Triumph 2000 Mk2	219	6/70	1998	95	15.0	26.0	4	—	—	—	3120	2600	2255*	1885	1340	1090
Triumph 2500TC	RI 112	1974	2458	101	11.5	27.0	5	—	—	—	3395	2750	2355*	1885	—	—
Triumph Spitfire 1500	376	2/76	1493	97	12.5	35.25	5	3140	2745	2360	1985	1665	—	—	—	—
Triumph Stag	273	3/72	2997	118	10.2	22.5	S/R	—	—	—	5125	4185	3420	2750	2205	1735
Triumph TR7	401	11/76	1998	108	10.2	28.75	6	—	3615	2875	2430	—	—	—	—	—
Lada 1200	355	9/74	1198	91	15.0	33.25	3	1875	1650	1400	1180	985	815	—	—	—
Lancia Beta 2000	RI 171	1976	1995	107	11.2	26.5	6/7	3965	3490	2925	—	—	—	—	—	—
Mazda 1000 2-door	343	6/71	985	78	20.0	33.5	3	—	—	—	1465	1245	1055	890	—	—
1300 hatchback	424/D4/78	17/78	1272	89	15.9	36.5	4	2670	2295	1960	—	—	—	—	—	—
Mercedes 280E auto	D/79	7/79	2746	120	9.4	21.0	7	—	11635	9755*	6315	5250	4310	3515	2875	—
Opel Kadett S estate 3-door	338	5/74	1196	84	16.7	32.0	4	2940	2575	2395*	1890	1605	—	—	—	—
Ascona 1.9SR	302	3/73	1997	96	12.3	25.5	6	—	3665*	2935*	2470*	1825	1495	1230	—	—
Rekord 4-door	287	9/72	1897	101	12.0	28.0	4	—	—	—	2575*	2155	1785	1465	1215	1015
Peugeot 104 4-door	325	11/73	954	84	17.3	36.5	3	2390	2140	1815*	1545	1320	1130	980	—	—
304	386	5/76	1290	92	16.7	35.5	3	—	2630	2270*	1895	1580	1315	1100	905	—
504GL	RI 140	13/76	1971	99	13.7	27.75	5	4360	3765	3145	2600	2155	1785	—	—	—
504 estate	275	4/72	1971	98.5	13.8	24.5	5	5175	4505	3790	3145	2625	2180	1835	1490	—
Reliant Robin	365	3/75	148	72	19.6	47.0	2	—	1725	1535	1350*	1155	1035	—	—	—
Scimitar GTE	303	3/73	2994	118	9.1	21.25	7	7230*	6190	5150	4235	3420	2825	2355	1910	—
Renault 4TL	RI 121	1975	945	74	26.4	39.0	1	2220	1985	1665	1400	—	—	—	—	—
5TL	349	8/74	956	85	19.7	42.0	2	2480	2255	1915	1615	1365*	1150	980	—	—
5TS	370	11/75	1289	93	13.3	36.25	4	2925	2620	2215	1895	1610	—	—	—	—
6TL (1100)	364	3/75	1108	82	17.9	37.75	3	2								

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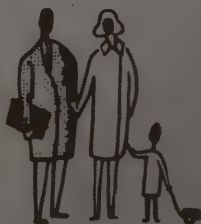
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Page 32 What the Arabs have done to the used-car market

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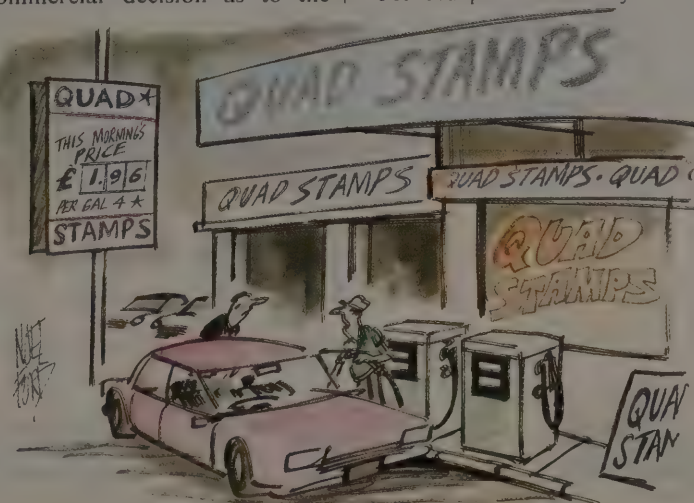
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(Special Offer, page 56); look at the bolt-on goodies business (pages 43-48); update your running costs (Index, page 9); give you all the prices you need to know (pages 4, 64); and . . . well, generally put ourselves about to repay the compliment that you paid us when you parted with that 50p. Which is as good a cue as any to drag your eyes to page 63, too.

- the Editor

Monitor Monitor Monitor Monitor **Monitor** Monitor Monitor Monitor Monitor

It can only be hoped that every other manufacturer will follow suit, for in Britain alone out-of-tune cars are wasting 160million gallons a year, and pumping



'Actually, sir, you have to give us the stamps'

Protected Eagles No.4

Bald or American Eagle

A sea eagle, found along the coasts, lakes and rivers of N. America. It returns each year to the same mate and nest, the largest built by one pair of birds. Bald Eagles have been greatly reduced in number by man's activities. Like all eagles, it is now a protected bird.



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excessively harmful emissions into the atmosphere.

Hopefully, the devices announced by VW and GM will go a long way to remedy the situation.

Total recall

Transport Minister Norman Fowler has approved a new procedure for the recall of faulty vehicles.

Devised by the Department of Transport and the Society of Motor Manufacturers and Traders, the procedure will, according to SMMT director John Beswick, ensure that 'when a safety-related design or manufacturing fault is discovered, the problem will be identified and remedied as rapidly and as conveniently as possible for the customer. Any manufacturer has much to lose and nothing to gain by ignoring this principle.'

With the aid of Swansea's Driver and Vehicle Licensing Centre computer, the SMMT is confident that Britain can achieve a higher recall success rate than in other countries.

Manufacturers will first attempt to contact the owner of a faulty vehicle by letter. If there is no response, a further letter will be sent by recorded delivery. If this, too, is ignored then Swansea will be asked to supply the name and address of the car's owner.

Fare exchange

If the United States should ever ration petrol, we predict that the government will not issue the millions of ration books stockpiled since the days of the Nixon administration.

The reason? Ticket machines on the New York subway will accept the coupons... and deliver a dollar's worth of change.

Angels grounded

£1½million has been allocated for yet another 'clunk-click' campaign, bringing the amount spent on seatbelt publicity since 1972 to £7½million. Consider what other life-saving projects that sum could have financed if seatbelt wearing—called for by the AA since 1968—had been made mandatory.

It could, for example, have bought 45 purpose-built helicopter ambulances which, as DRIVE reported (July–August), are used extensively in W Germany to speed road accident victims to hospital as well as provide in-flight treatment.

Even Yugoslavia—one of Europe's poorest relations—has recently signed a deal for 13 such machines. Britain, in contrast, has... one. Not that you're likely to see the Bell Jet Ranger (based at Mary Hill, on the outskirts of Glasgow) pressed into service on any life-saving mission: its private operator, Donald McGilivray, boss of the air-charter firm Wasp Helicopters Ltd, says

that talks with the Scottish Ambulance Service have proved unproductive.

Explains a SAS official: 'Arrangements already exist with Navy and RAF bases whereby helicopters can be called out.' These, however, have not been equipped as air-ambulances, which, in W Germany, attend 6000 road accidents a year.

Closing time

The prospect of dry petrol pumps at the Central Garage, Fladbury, may not matter a jot to 99.996% of Britain's population. But to the other 0.004%—the 2000 citizens in and around this Hereford and Worcester village—it's a liberty that will restrict their liberty.

The local vicar, the Rev John Champion, speaks for most of his parishioners when he says: 'First, Dr Beeching took the trains away. Now, when our buses are few and far between, the petrol is about to vanish.'

The trouble is that many other places like Fladbury are likely to find themselves in the same situation. Parts of Lincolnshire, Norfolk, N Yorkshire and Durham, among others, are already facing inconvenience and hardship—all because Shell and Esso have decreed that it is uneconomic for them to supply petrol on a contractual basis to outlets that sell less than 100,000gal and 75,000gal a year respectively.

What will be the result of this drastic pruning? One forecast by the Amoco company is that, by the mid-1980s, the number of forecourts will be slashed by 30% from 28,295 to 20,000. And the rural areas will be the hardest hit.

Says Vic Jones, owner of the Central Garage, Fladbury: 'We've sold only Esso petrol for 25 years, but loyalty obviously doesn't come into it when big companies make their decisions.'

'My last delivery was in September. From now on, Esso will supply me on a spot-sale basis—and then only if there's petrol to spare. I'll have to pay the same as it costs the motorist. By the time I add my profit margin and VAT, the pump price will be exorbitant.'

'Without pumps, my garage will fade into obscurity. The way things are going, I'll have to close early in the New Year.'

Perhaps the picture wouldn't be so bleak if the next filling station, two miles down the road (Paine's Garage at Wyre Piddle), wasn't already struggling to meet its local demand. As at the Esso garage at Pershore (five miles from Fladbury), it is often a case of 'Sorry, regulars only'. There are problems in the other direction, too. A spokesman for the Arthur Howard service station

continued on page 8

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MINI CAR TESTS

Peugeot 505

Yet another contender in the increasingly contested company car market is Peugeot's 505 range. The four new saloons slot into Peugeot's line-up under the 604 flagship, to compete with prestigious 2litre saloons such as Ford's Granada, Vauxhall's Carlton and the Audi 100.

Much of the 504's hardware is to be found on the 505, including a slightly more powerful version of the trusty 1971cc pushrod engine for the GR and SR versions. TI and STI models use the co-operative Peugeot/Renault 1955cc overhead-camshaft en-

gine, which has fuel injection.

Automatic transmission is available on all models, and a five-speed gearbox is standard on the STI. For the growing band of DERV fans there are also two diesel-powered 505s heading for our shores in 1980.

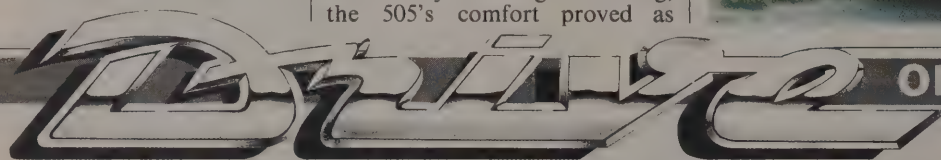
Peugeot's hitherto conservative and unadventurous trim was abandoned in the STI that DRIVE sampled in favour of tweed-clad seats and door inserts that could make-up nicely into a dapper sports jacket. It certainly made the interior more inviting, and, after a hard day's driving and riding, the 505's comfort proved as

good as it looked. There's plenty of room to stretch out and relax, and the suspension refused to let even French minor roads spoil our comfort.

Mechanical refinement and noise suppression, however, seemed no better than average for this class of car, with a trace of transmission thrash, and an

exhaust boom to contend with at higher cruising speeds. On the plus side, the fuel-injection system delivered its goods very crisply right from the off, and we were most impressed by the standard power steering, which gives confidence when the car is hurried, and takes the strain out of parking.

In all, we came away impressed.



ON-THE-ROAD NEW-CARS

What's it called? How much does it cost? DRIVE's superguide to the latest prices of new cars currently available in Britain tells you all you need to know, immediately, whether you're buying or just browsing. And our prices aren't just what the manufacturer says: we tell you the size of the cheque you can expect to write to put your new Mini or Rolls on the road, seatbelts, numberplates, road-fund licence and delivery paid. Want to know more? Well, if the car of your choice has a DRIVE/AA road-test report number beside it, you can have a copy of the best car criticism in the business. AA members can apply to their regional AA office—address in *Handbook*. Otherwise, write to DRIVE New-car Price-guide, Fanum House, Basingstoke, Hants, RG21 2EA. But we must now ask readers who request more than one to pay 10p for each report.

(a) denotes road test on automatic model only; delivery charges where applicable estimated on an average 200 miles.

	Manual	Auto	DRIVE/AA Road Test
--	--------	------	-----------------------

AC (18 dealers)

3000ME	13377	—	
--------	-------	---	--

ALFA ROMEO (150 dealers)

Alfasud Super			
1.3 (1350cc)	3670	—	
Super 1.5	3852	—	
Ti 1.5	4075	—	
Sprint 1.5	5055	—	D6/79
Giulietta 1.6	4895	—	
Alfetta GTS	5906	—	
2000L	5799	—	
GTV2000	6576	—	
GTV Strada	8035	—	
Alfasud Sprint			
Veloce	5215	—	
Giulietta 1.8	5215	—	

ASTON MARTIN (13 dealers)

V8	28858	28858	
V8 Vantage	30987	—	
V8 Volante	36168	36168	
Lagonda	—	40040	

AUDI (360 dealers)

80LS	5150	5485	
GLS	5758	6093	
GLE	6816	—	
100 Avant L	5961	—	
L5S	6435	6964	R1176
GL5S	6945	7475	R1176
Avant L5D	7211	—	
Avant GL5S	7320	7850	R1176
GL5E	7673	8202	D8/78(a)
CD5E	—	9425	D8/78(a)
Avant CD5E	—	9868	

AUSTIN MORRIS (1850 dealers)

Mini 850 City	2409	—	RTR340
850SDL	2962	—	
1000	2663	3073	D3/78
Clubman			
(1098cc)	2951	3361	
estate			
(1098cc)	3205	3615	
1275GT	3311	—	
Allegro 1.1 2dr	3205	—	
1.3 2dr	3326	3756	
4dr	3450	3880	
3dr estate	3688	4118	
2dr L	3590	4020	
4dr	3714	4144	RTR377
3dr estate	3952	4382	
4dr HL	4134	4564	
1.5 4dr L	3880	—	

3dr estate L	4118	—	
4dr HL	4300	—	
1.7 4dr L	—	4302	
3dr estate L	—	4540	
4dr HL	4497	4722	
Vanden Plas			
1500 4dr	4838	5248	
Marina 1300	3303	—	
4dr	3431	—	
1300L 2dr	3565	—	
4dr	3659	4030	RTR392
1300HL 4dr	4038	4409	
1300 estate	3909	—	
1700 4dr	3733	—	
1700L 4dr	3971	4342	
1700HL 4dr	4378	4749	D4/79
1700 estate	4130	—	
1700L estate	4411	4782	
Maxi 1500	4059	—	RTR263
1750	4237	4674	
1750HL	4469	4906	
1750HLS	4591	—	
Princess 1700L	4352	4815	
1700HL	4672	5135	
1700HLS	5163	5626	
2000HL	4926	5389	
2000HLS	5441	5904	
2200HL	5316	5779	D11/78
2200HLS	5908	6371	

BENTLEY (78 dealers)

T2 Series	—	36824	
Corniche	—	53494	
Convertible	—	56808	

BMW (145 dealers)

316	5311	—	R1149
320	6680	7117	R1149
323i	7761	—	
518	6865	—	
520	7983	8420	D2/78
525	9101	9538	
528i	10326	10763	
633CSi	—	17673	
635CSi	18951	—	
728i	N/A	N/A	
732i	N/A	N/A	
735i	N/A	N/A	

BRISTOL (0 dealer)

412 S2	—	—	
convertible-	—	31256	
saloon	—	34576	
603 S2	—	—	

BUICK (5 dealers)

Century	—	9578	
---------	---	------	--

CADILLAC (5 dealers)

Seville Elegante	—	21769	
Elegante (lhd)	—	19396	

Seville	—	18362	
Seville (lhd)	—	15989	
Fleetwood	—	—	
Brougham	—	—	
d'Elegance	—	15869	

CATERHAM CARS (0 dealers)

Super Seven TC	5238	—	
1600GT	4633	—	

CHEVROLET (5 dealers)

Caprice Classic	—	12904	
Classic (lhd)	—	10680	
Classic estate	—	13028	
Classic estate (lhd)	—	10805	
Monte Carlo coupé (lhd)	—	9878	
Corvette (lhd)	—	12228	

CITROEN (260 dealers)

2CV6	2205	—	RTR118
Dyane Weekend	2423	—	D1/79
Visa Club	3083	—	
Super	3383	—	
GS special	3412	—	
estate	3702	—	
Club	3766	4009	RTR384
Club estate	4021	—	D5/79
Pallas	4182	4525	
X3	4445	—	RTR416
CX Pallas 2400	7264	7468	
Injection	—	7932	
CX GTi	7910	—	
Prestige	—	—	
Injection	10549	—	
Safari	6790	7121	RTR416
S Familiale	6912	7243	
CX2500D S	8666	—	
D Safari	7172	—	
D Familiale	7292	—	
CX Reflex	5830	—	
CX Athena	6362	—	

COLT (318 dealers)

1400 GLX 3dr	—	—	
hatchback	3919	—	
GLX 5dr	—	—	
hatchback	4189	—	
Celeste 1600ST	4349	—	
GS	4559	—	
2000GT	4879	—	
Sigma 1600GL	4559	4904	
2000GLX	5149	5494	RTR432
estate	5729	—	
Sapporo 2000	6339	6684	

DAIHATSU (78 dealers)

F20 soft top	4941	—	
hard top	5101	—	

F50 soft top (diesel)	5435	—	
hard top (diesel)	5595	—	

DATSUN (380 dealers)

New Cherry 3dr	—	—	
hatchback	2898	—	
GL 3dr	3129	—	
4dr saloon	3192	—	
5dr estate	3408	—	
3dr coupe	3602	—	
Sunny 1200GLS	—	—	
2dr	3388	—	
4dr	3495	—	
1400GLS 2dr	—	3860	
4dr	—	3957	
1200 estate	3729	—	
1400 coupe	—	—	
4-speed	3829	—	
1400 fastback	—	—	
estate	4031	—	
Violet 140J Mk3	3823	—	R1132M
160J Mk3	3906	4204	
SSS coupe	4391	—	
Bluebird 160B	—	—	
MkII	4122	—	
180B	4230	4528	
180B estate	—	—	
MkII	4584	—	RTR316
180B SSS	—	—	
MkII	4730	—	
Laurel 2litre	—	—	
MkII (PAS)	5628	5968	
2.4litre (PAS)	6328	6668	
Skyline 240K	—	—	
coupe	7093	7433	
280ZX	—	—	
2-seater	8760	9100	
280ZX 2 + 2	9714	10054	
280C saloon	7226	7566	
280C estate	7054	7394	

DE TOMASO (3 dealers)

Pantera GTS	19278	—	
Longchamp	—	21502	
Deauville	—	24635	

FERRARI (18 dealers)

Dina 308GT4	17642	—	
308GTB	19081	—	
308GTS	20009	—	
400i	31917	31917	
512B	33189	—	

FIAT (400 dealers)

126	2159	—	
de Ville	2350	—	D1/79
127 900L 2dr	2838	—	R1137
1050L 3dr	2972	—	
1050C 3dr	3095	—	
1050CL 3dr	3216	—	RTR429
Sport	3578	—	
128 1300CL	3504	—	
CL estate	3633	—	
Berlinetta Special Series	—	—	
X/19 1500	5474	—	
Mirafiori 1300L	—	—	
2dr	3555	—	
4dr	3705	—	
1600CL 4dr	4367	4670	
estate	4751	5054	RTR412

Opel Kadett

What Opel makes today, Vauxhall sells tomorrow—now that little more than badge engineering separates the two arms of General Motors in Europe. So a new Opel is more than just another foreigner—it's also the shape of things to come from Luton.

Out goes the rear-wheel-drive Opel Kadett, and in comes a completely new version with front-wheel drive and a transversely mounted engine. Opel boasts of a significant increase in interior space and comfort—both lacking in the retired Kadett—and better fuel economy. There are six body styles: two

saloons (with either two or four doors), two hatchbacks (with three or five doors), and two estates (with three or five doors). The standard engine is a 1.2litre, 53bhp unit, 'similar', says Opel, to the well-tried unit in the old Kadett. In addition, there will be two versions of a completely new 1.3litre overhead-cam, crossflow engine with a light-alloy cylinder head, developing 60bhp and 75 bhp. Right-hand-drive models should be available in the UK this November.

Claimed performance figures for the 1.3 engine are slick for the class. The standard model reaches

60mph from standstill in 15.5sec, and the S version cuts this time by 2sec. Top speeds are 91mph and 98mph respectively, and only the S uses 4-star fuel.

It looks to DRIVE like the end of

the line for Vauxhall's home-grown Chevette range—but Luton says that the new fwd car will be marketed alongside the Chevette 'for the time being'.

A nod's as good as a wink...



PRICE-GUIDE

Supermirafiori			
1600TC	5025	5328	D10/78
Mirafiori Sport	5599	—	
132 2litre	5893	6234	
Strada 65L 3dr	3395	—	
65L 5dr	3509	—	
65CL 3dr	3668	—	
65CL 5dr	3780	—	
75CL 3dr	4028	4337	
75CL 5dr	4140	4449	

FORD (1240 dealers)			
Fiesta 950	2782	—	RTR417
950L	3092	—	
1100	2926	—	
1100L	3234	—	
1100S	3596	—	
1100 Ghia	4021	—	RI170
1300S	3784	—	
1300Ghia	4167	—	
Escort 1100	—	—	
Popular	2783	—	RI136

1100 Popular	—	—	
Plus	2904	—	
1100 Popular	—	—	
Plus 4dr	3024	—	
1100L	3162	—	
1100L 4dr	3283	—	
1100 estate	3119	—	
1300 Popular	2874	—	
1300 Popular	—	—	
Plus	2960	—	D4/78
1300 Popular	—	—	
Plus 4dr	3191	—	

1300L	3253	3573	
1300L 4dr	3373	3693	
1300GL	3573	3893	
1300GL 4dr	3693	4013	
1300 Sport	3771	—	
1300 Ghia	4191	4515	
1300 Ghia 4dr	4312	4636	
1300 estate	3276	—	
1300L estate	3618	3938	

1300GL	—	—	
estate	4012	4332	
1600 Sport	3880	—	
1600 Ghia	4420	4744	D4/79
Cortina 1300	3468	—	
1300 4dr	3597	—	
1300L	3799	—	RTR372
1300L 4dr	3928	—	
1600 4dr	3797	—	

1600L	4128	4452	RTR404
1600GL	4516	4840	
1600 Ghia	5359	5683	
1600 estate	4205	—	
1600L estate	4574	4898	
1600GL estate	4962	5286	

1600 Ghia	—	—	
estate	5805	6129	
2000GL	4756	5080	
2000 Ghia	5502	5826	
2000GL estate	5202	5526	RTR413

2000 Ghia	—	—	
estate	5948	6272	
2300GL	5365	5689	
2300 Ghia	6111	6435	
2300GL estate	5811	6135	
2300 Ghia	—	—	
estate	6557	6881	
Capri 1300L	3854	—	RTR373
1600L	4064	4388	

1600GL	4324	4648	RTR342
1600S	4934	—	
2000GL	4580	—	
2000S	5143	—	RI166
2000 Ghia	5979	6303	
3000S	5534	—	
3000 Ghia	—	6742	RI114
Granada 2000L	5409	5733	RI128
2000L estate	5978	—	
2100 diesel	5820	—	
2300L	5723	6047	
2300GL	6961	7356	
2300L estate	6280	6604	
2800GL	—	7438	
2800i GLS	8138	8533	
2800 Ghia	—	9005	
2800i Ghia	9431	9755	
2800GL estate	—	7967	D8/78
2800i GLS	—	8519	8843
estate	—	—	
2800 Ghia	—	—	
estate	—	9418	D8/78
2800i Ghia	—	—	
estate	9764	10088	

Rallye Sport	—	—	
RS 2000	4682	—	
RS 2000 Custom	5283	—	

FORD USA (14 dealers)			
Mercury	—	—	
Monarch Ghia	—	—	
(rhd)	—	9428	
Mustang Ghia	—	—	
Turbo (lhd)	—	7879	

HONDA (237 dealers)			
Civic 1200 3dr	3088	3318	RTR362
1200 5dr	3288	3518	RI155
Accord 3dr	4298	4568	RTR420
4dr	4488	4758	D4/79
Executive DL	—	5588	
Prelude	5088	5358	

JAGUAR ROVER TRIUMPH			
(319 Jaguar-Daimler; 950 Rover-Triumph; 486 Land-Rover; 1850 MG dealers)			
Jaguar XJ6 3.4	12651	12651	RTR380
XJ6 4.2	13923	13923	
XJ12 5.3	—	16930	RTR305
XJS	—	18680	RTR394

Daimler			
Sovereign 4.2	14658	14658	
Double-Six	—	17682	
Vanden Plas 4.2	—	19381	
Double-Six	—	—	
Vanden Plas	—	22814	
Rover 2300	6526	6916	D8/78
2600	7545	7775	
3500	9194	9434	RTR428
V8S	10841	11071	

Range Rover 3.5			
Land-Rover			
diesel	5784	—	
lwb	5952	—	
lwb (diesel)	6642	—	
lwb 6-cylinder	6211	—	
Triumph Spitfire	3916	—	
hardtop	4025	—	
Dolomite 1300	3821	—	
1500	4078	4472	
1500HL	4518	4912	
1850HL	5096	5490	

Sprint	6182	6321	
TR7	5456	5689	
MG Midget	3489	—	
MGB Sports	4646	—	RTR243
MGB GT	5283	—	

JEEP (16 dealers)			
CJ6 soft top	5694	—	
CJ7 soft top	5653	—	
hard top	6441	—	

Renegade			
soft top	7197	—	
hard top	7936	—	
CJ7 Golden Eagle			
soft top	7197	—	
hard top	7936	—	

Cherokee 4dr	9571	9678	
(6-cyl)	—	10551	
S (6-cyl)	—	11169	D2/79
SV8	—	11488	
Chief V8	—	11829	
Golden Eagle	—	—	

LADA (195 dealers)			
1200	2408	—	RI175
estate	2719	—	
1300ES	2806	—	D4/78
1500 estate	2863	—	
1500ES estate	3227	—	
1600	3078	—	RI173
1600ES	3478	—	RI173
Niva	4399	—	

LANCIA (137 dealers)			
Beta 1300	4314	—	
1600	5146	—	
2000	5439	—	RI171
2000ES	5819	—	
Beta coupé 1300	5113	—	
1600	5828	—	
2000	6304	—	

Beta Spyder	—	—	
2000	6851	—	
Beta HPE 1600	6576	—	
2000	7108	—	
Gamma Berlina	8012	—	
Gran Turismo	10011	—	

LOTUS (36 dealers)			
Elite 501	14836	15233	
502	15801	—	
503	16387	—	
504	—	16605	
Eclat 520	13134	—	
521	14162	14559	
522	15159	—	
523	15719	—	
524	—	15968	
Espirit 701	14335	—	
702	15030	—	

MASERATI (9 dealers)			
Merak SS	19054	—	
Kyalami	25757	—	
Khamis	28248	—	

MAZDA (260 dealers)			
1300 hatchback	3456	—	D4/78
1300 hatchback	—	—	
5dr	3616	—	RTR424

1.4 Special	—	—	
hatchback	3829	—	
1400 hatchback	—	—	

5dr	—	3956	
1400 estate	3829	—	D5/79
Montrose	—	—	
1600GL	4254	—	
GLS	4521	—	
2000GLS	4840	5160	
GLS coupé	5319	—	
2000 estate	5486	5811	
RX-7 2 + 2	—	—	
coupé	8705	—	

MERCEDES-BENZ (96 dealers)			
200	7928	—	
200D	8104	—	
230	—	9070	
230C	—	11057	
240D	9086	9682	
240D lwb	14199	14639	
240TD estate	10586	10586	
250	—	10490	
250T	—	11864	
250 lwb	—	14199	
300D	—	11302	
280E	—	12507	
280SE	—	14614	
280CE	—	13581	
280TE estate	—	13993	
350SE	—	16996	
350SL	—	16825	
450SE	—	18295	
450SEL	—	19317	
450SL	—	17976	
450SLC	—	21143	
450SEL 6.9	—	30632	

MORGAN (18 dealers)			
4/4 1600	5167	—	
4-str	5684	—	
Plus 8	7547	—	

OPEL (237 dealers)			
(New Kadett range due November)			
Kadett Economy	2915	—	
DL	3165	3607	
City DL 3dr	3238	3680	
Special	3426	3868	
Special 3dr	3537	3978	
Special 4dr	3515	3957	
Special estate	3740	4182	RTR338

Volkswagen Golf GTi

Price £5135 On the road £5256

British drivers can at last buy the fuel-injected Volkswagen Golf GTi and Scirocco GLi.

Performance from both cars is remarkable—as befits the most powerful VWs ever put into production. VW claims that the Golf GTi has a top speed of 113mph and accelerates from 0-60mph in 9.0sec, and the Scirocco is claimed to be 0.2sec quicker to 60mph, with its more-aerodynamic shape raising the top speed to 115mph.

At a steady 75mph, it's claimed, the Golf GTi returns 32.5mpg, compared with 29.1mpg for the 1497cc GLS version.

GTi modifications include a

special cylinder head with larger valves, Heron combustion chambers in the piston crowns, new inlet and exhaust manifolds and, of course, Bosch K-Jetronic fuel injection—boosting the standard 1500cc engine to 1600cc and a massive 110bhp (57% more power than the old Golf GLS).

To control all this muscle, the Golf GTi now has a lower and stiffer suspension, an oil cooler, and anti-roll bars front and back. Disc brakes are ventilated and the 5½-in-wide wheels are shod with fat, high-speed radials.

DRIVE has sampled the GTi Golf and Scirocco GLi both on public and private roads, and

came away delighted. The ride may be harder, but that was the only trade-off against their sporting behaviour. Around town, both cars were quiet and smooth, with no low-speed tantrums.

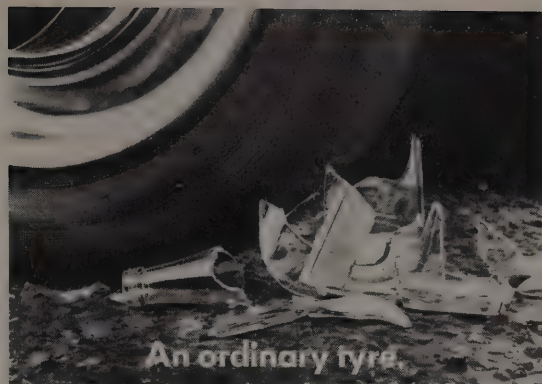
For those with the money to

indulge their desires, there's also a Scirocco called the Storm, to be sold exclusively in this country. For an extra £565, VW elitists get an interior trimmed throughout in hide leather, velour carpets and other niceties.



ON-THE-ROAD NEW-CAR PRICE-GUIDE

de Ville 5.3 saloon — 58390 convertible — 72355 Lima 8390 8813 Lima Turbo 11090 —	5GTL 3dr 3412 — RI143 5dr 3547 — 5TS 3786 — RTR370 5 auto — 3861 5 Gordini 4836 — 6TL 3454 — RTR363 12 3334 — RTR385 12TL 3689 — RTR385 estate 4108 — RTR374 14TL 3640 — RTR414 14GTL 3764 — 14TS 4216 — 15GTL 4616 — D6/78 16TL 4410 4777 RTR291 16TX 5337 5703 RTR359 17TS 5696 — 18TL 3895 — estate 4212 — 18TS 4242 — estate 4612 4986 18GTL 4459 — 18GTS 4930 — 18 auto — 5042 20TL 5214 — RTR409 20LS 5909 — 20TS 6339 6612 D12/78 30TS 7497 7909 RI134 30TX 8884 9157	1.3LS 3313 3685 1.3GL 3596 3968 1.6GL 3743 4115 D6/78 1.6GLS 4250 4622 1.6Ti 4553 — Lotus 7120 — Avenger 1.3LS 3444 3816 D9/78 1.3GL 3914 4286 1.3LS estate 3833 4205 1.3GL estate 4327 4699 1.6LS 3576 3948 1.6GL 4046 4418 RTR405 1.6GLS 4418 4790 RTR339(a) 1.6LS estate 3965 4337 1.6GL estate 4459 5045 Horizon LS (1118cc) 3440 — LS (1294cc) 3597 — GL (1118cc) 3921 — D5/79 GL (1294cc) 4078 — GLS (1294cc) 4470 — 2litre 5086 5425 RTR308 Alpine LS (1294cc) 3992 — RI151 LS (1442cc) 4176 — GL (1294cc) 4408 — GL (1442cc) 4678 — GLS (1442cc) 5352 — RTR381 Matra Rancho 6436 — RTR381	L estate 3657 — GL 3dr 3638 — D3/79 GL 4dr 3714 — 2300HS 3dr 6119 — Viva E 3052 — RTR378 E 4dr 3174 — 1300L 2dr 3331 — L 4dr 3453 — L estate 3699 — GLS estate 4131 — GLS 2dr 3762 — GLS 4dr 3884 — 1800GLS 4dr 4084 4419 Cavalier 1300L 3873 — D9/78 1300L 4dr 3962 — D9/78 1600L 2dr 4043 4473 RTR382 1600L 4dr 4169 4599 RI163(a) GL 4dr 4631 5061 Sports hatch GL 4948 5378 Sports hatch GLS 5410 5840 2000GL 4dr 4874 5304 RI152 GLS saloon 5337 5767 Sports hatch 5653 6083 Carlton 2000 5807 6264 D12/78 estate 5dr 6377 6834 Royale 9891 — coupé 10249 10249
PEUGEOT (255 dealers) 104GL 3140 — RTR406 104ZL 3118 — 104SL 3497 — RTR406 104ZS 3664 — RI146 104S 3970 — 304GL estate 3783 — RTR386 304SL estate 4070 — 305GL 3958 — D9/78 305GR 4284 — D9/78 305SR 4668 — RI162 305GRD (diesel) 4957 — 504 4775 5347 RI174 504 estate 5350 — 504 diesel 5479 — RI125 504 diesel estate 6023 — 504GL 5491 6063 RI159 504GL estate 5957 6529 504GL diesel 6282 — RTR425 504TI 6017 6589 RTR358 504 Family 5996 6568 504 Family diesel estate 6787 — 604SL 8276 8846 RTR391 604TI 9417 9828 RI167	ROLLS-ROYCE (78 dealers) Silver Shadow II — 36824 RTR312 Silver Wrath II — 43353 Corniche — 53494 Convertible — 56808 Camargue — 65142	TOYOTA (230 dealers) Starlet GL 3dr 3179 — D3/79 GL 5dr 3276 — D3/79 1200 3dr 3408 — 1200 5dr 3510 — RTR399 Corolla 30-1200DL 2dr 3144 — 1200DL 4dr 3263 3469 estate 3531 — 1600 Liftback 3915 — Carina 1600DL 3976 4269 D10/78 estate 4277 — Celica 1600ST coupé 4465 — 2000ST Liftback 4858 — RTR423 2000XT Liftback 5598 5795 2000GT Liftback 5903 — Cressida 2000DL 4674 — estate 5026 5161 Crown 2600 Super — 8126 Corona 1800 Liftback 5404 5604	VOLKSWAGEN (360 dealers) polo N900 3dr 3065 — RTR408 L900 3dr 3366 — RTR408 GLS 1100 3dr 3709 — Derby S1100 2dr 3221 — LS1100 2dr 3561 — D3/79 GLS 1300 2dr 3906 — RI168 Golf N1100 3dr 3379 — L1100 5dr 3820 — LD (diesel) 1500 5dr 4591 — RI160 LS 1300 3dr 3996 — GLS 1300 5dr 4433 — 1460 5dr — 4775 GTi 1600 3dr 5256 — Passat LS 1600 5dr 4904 5220 RTR388 GLS 1600 5dr 5312 5628 RI165 LS estate 5189 5505 GLS estate 5652 5968 LD 1500 estate 5581 5897 Scirocco GLS 1600 coupé 5528 5893 D6/79 GLi 6425 — Storm 6893 —
POLSKI FIAT (125 dealers) 125P 2498 — RTR379 estate 2860 — Polonez 3319 —	SAAB (190 dealers) 99GL 2dr 5292 — 99 Turbo 2dr 7877 — 99GL 4dr 5762 6262 RTR419 900GL 3dr 6477 — 900GLS 3dr 6767 7322 900GLS 5dr 7047 7677 900EMS 3dr 7847 — 900GLE 5dr — 8682 Turbo 3dr 10037 — Turbo 5dr 10437 —	TVR (26 dealers) 3000M 8196 — convertible 8931 — Taimar 9185 — D7/78 Turbo 12196 — convertible 12931 — Taimar Turbo 13185 —	VOLVO (229 dealers) 343DL 4115 4282 D10/78 244DL 6146 6626 RTR426 244GL 7530 7889 RTR426 244GLE 8147 8535 245DL estate 6887 7364 RTR368 245GL estate 7601 7961 245GLE estate 8261 8623 264GL 8707 9067 264GLE 9857 10146 RTR395 265GL estate 8864 9224 265GLE estate 9660 10019 262C coupé — 14438
PONTIAC (5 dealers) Firebird Trans-Am — 9864	SKODA (285 dealers) S110R coupé 2274 — 105S 2115 — 105L 2221 — D1/79 120L 2328 — 120LS 2693 —	VAUXHALL (650 dealers) Chevette E 2454 — E 3dr 3001 — E 4dr 3077 — L 2dr 3234 — L 3dr 3280 — L 4dr 3356 — RTR396	
PORSCHE (18 dealers) 924 coupé 9276 9755 D7/78 924 Lux 9755 10233 924 Turbo 13802 — 911 SC (coupé or targa) 16282 — 911 SC (sport coupé or targa) 17527 — 928 22000 22000 911 Turbo 28123 —	SPARTAN (0 dealers) Sports 2dr 4327 — 2 + 2 4647 —		
PORTARO (25 dealers) Pampas 250D 6066 — 250DL 6411 — 250DPU 6513 — 250DP 6637 —	SUBARU (80 dealers) 1600DL 2dr 3313 — 4dr 3462 3873 D6/78 Custom 4dr 3649 — coupé 3325 — GFT 3861 — DL estate 3687 — 4wd estate 4578 — D2/79		
RELIANT (200 dealers + 80 Scimitar) Robin 850 2462 — estate 2663 — Super Robin 850 2833 — estate 2965 — Kitten DL 2795 — DL estate 2983 — Scimitar GTE 8971 8971 RTR303	SUZUKI (20 dealers) LJ80 4wd 3310 — LJ80V 4wd 3760 —		
RENAULT (435 dealers) 4 2672 — RTR364 4TL 2885 — RTR364 5 2867 — 5TL 3237 — D3/78	TALBOT (650 dealers) Sunbeam 1.0LS 3073 — RI164 1.0GL 3355 —		



An ordinary tyre.

Last year alone in Britain over 600 people were killed or seriously injured as a result of tyre failure.

For some of them, the cause was the most horrifying of all tyre mishaps—a burst at speed.

One moment they were driving along safely.

The next they were careering wildly out of control.

If only they had been driving on Dunlop Denovo run-flat tyres, it need never have happened.

Because with Denovo tyres you stay safely in control, even after a blow-out at high speed.

Indeed you can even drive on for up to 100 miles at speeds as high as 50mph without so much as changing the wheel.

The tyre stays locked to the wheel, so your car stays locked to the road.

An ordinary tyre is held to the rim by the air pressure inside. In a blow-out that pressure suddenly vanishes.

The tyre folds away from the rim.

And the rim digs into the road.

Within seconds you're probably out of control. With Dunlop Denovo, however, the tyre is locked to the rim. So, even with no air pressure

inside, the rubber stays firmly in contact with the road. And you stay firmly in control.

You can throw away your jack.

With Denovo tyres on your car, you can at least forget about changing wheels in the middle of traffic.

In the event of a puncture or blow-out, you just drive on.

Then, whenever it's convenient, call in at any of Britain's 750 Denovo tyre specialists.

The optional extra that may save your life.

You'll find that Dunlop Denovo tyres give you the same wet grip, high mileage and sure-footedness you get from any other good radial tyre.

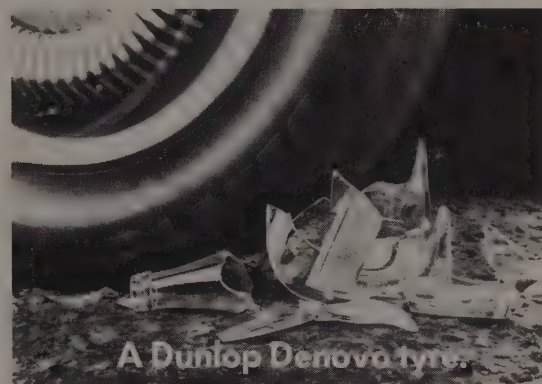
Plus a level of safety and convenience you get from no other tyre.

Already they're fitted as standard to every Mini 1275 GT. You can also order them on the Fiat 126, De Ville and Mirafiori Saloon.

As well as the Rover range, the Princess range and the Mini Clubman Saloon and Estate.

You can be sure that more cars will soon be offering you the Denovo option.

How optional are your family's lives?



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Pop.
You're not.

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My car is/will be.....

D

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"Stainless steel exhaust systems are expensive"

"NONSENSE!"

The durability and efficiency of stainless exhaust systems are widely known, however some motorists still think that stainless steel costs much more than conventional mild steel systems. These are the facts:

A Grundy stainless steel exhaust system can last three or four times longer than a standard system, but does not cost much more initially, and CARRIES A 5 YEAR UNLIMITED MILEAGE GUARANTEE!

Just compare the following prices! You know it makes sense to fit Grundy.

	Typical Mild Steel	Grundy Stainless Steel
Princess 1800	£36.92	£60.32
Allegro 1100, 1300	£29.75	£48.70
Dolomite 1850 HL	£44.08	£72.16
Maxi 1500, 1750	£42.10	£68.31
Escort Mark II	£34.24	£55.95
Volvo 244	£89.34	£139.55
Cavalier 1600	£58.53	£91.08
Volkswagen Beetle	£27.82	£39.62
Renault 12	£70.62	£79.52*

*excluding front pipe.

Prices include VAT at 15% but exclude fitting charges.

Grundy have an extensive range of exhaust systems to fit most popular UK and imported models.

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Some connecting parts are mild steel but fully guaranteed.

MONITOR

at Evesham (4½ miles) declares that its future is also uncertain.

Says the Rev Champion: 'The upshot is that villagers will use more petrol in order to find a petrol pump—at a time when the nation is exhorted to save it.'

Like the Motor Agents Association, the AA is opposed to any move that could lead to fewer petrol retail outlets. Says an MAA spokesman: 'Filling stations should at least be given the option of paying the extra costs involved, rather than just have supplies terminated.'

More smiles per gal

Every time the cost of petrol goes up, Richard Hannay smiles.

Hannay, a 32-year-old former management consultant, is the managing director of Scootabout Ltd, a London firm that specialises in moped hire. And, with fuel the price it is, he reports that business is booming.

Clients range from a barrister commuting to his office in the City to American tourists heading for Scotland—in fact, says Hannay, 'just about anyone with a full, provisional or motor-cycle licence.'

A day's hire costs £3.50, including comprehensive insurance, a helmet and all the gear, and free tuition. In contrast, a day's hire of a Ford Escort with only third-party cover is at least £6 more.

Come of age

It's heartening to hear the claim that a 22-year-old British invention could save us a healthy £2 million a day in fuel costs.

That's the estimate made by GKN Laycock, Sheffield-based manufacturer of Overdrive, if its product were a standard fitment on Britain's vehicles.

The company says that foreign interest in Overdrive increased rapidly when petrol price rises sent shivers down Western spines. It adds: 'Proven and regular tests show that Overdrive will save one gallon in six'—well in excess of the Society of Motor Manufacturers and Traders' 1985 target of a 10% cut in petrol consumption.

Tiresome

Got used to rising oil/petrol prices? Good, because the price of a tyre is soon going to get inflated, too.

'Blame it on the shortfall in supplies and the increase in prices of oil from Iran,' says Goodyear Great Britain's chief, Westi Hansen. 'Apart from natural rubber, all other materials used in tyre production are derived from crude oil.'

Hansen cites naphtha, the material used for the synthetic fibres of all tyre carcasses, as one of his problems. Naphtha remained steady at £65 a ton for

several years. In 1978 it shot to almost £100 a ton. Now it's nearer £200, and on the dreaded spot-market you can pay £300.

Add to that a 100,000ton shortfall in the production of natural rubber, and you begin to see the wisdom of avoiding tyre-screaming starting and braking techniques.

Aggro-ing problem

In the wake of DRIVE's investigation into aggro at the wheel (May-June), W Yorkshire's police has issued advice to motorists on how to deal with violent drivers. In its publication, *Road Safety Notes*, it's suggested that when a driver is ranting outside—

don't leave your door unlocked or window open. You are a sitting duck if he decides to yank you out or wallop you through the window

do drive away and leave him. If that's impossible, stay put and, if he looks dangerous, sound a continuous SOS on your horn until someone comes to your aid

don't lose your temper. According to the W Yorks force, there are many cases of auto aggression, so watch out...

Brake warning

Replacement brake pipes supplied by Motaproducts Automotive Ltd are being recalled. Recent investigations indicate that some may be defective, resulting in fractures and resultant loss of braking power.

The recall concerns Moprod coiled, pre-sized, copper-coloured ½in metal pipes sold (in red and yellow boxes) since 1 January, and the company warns that these should be replaced immediately.

All enquiries should be addressed to Motaproducts Automotive Ltd, West Way, Alvechurch Road, West Heath, Birmingham.

Roads information

Numbers in parentheses refer to maps in the 1978-1979 edition of the AA *Members' Handbook*.

BRITAIN

Major roads open Faringdon bypass A420, 3 miles, (17); Queensferry interchange A494, (23).

OVERSEAS

Italy Autostrada A23, Udine-Carnia: 40km section north of Udine now open.

Portugal Auto-estrada do Sul E4, Lisbon-Setúbal, extended 8.5km from Fogueteiro to Setúbal.

Spain All motorway tolls increased 15%. Autopista A68, Bilbao-Zaragoza: opening of Altube Junction -Logroño section delayed; most of Logroño-Zaragoza section (158km) now open; final 14.5km, Logroño-Agoncillo due to open November 1979.

Yugoslavia E94 Zagreb motorway bypass now open. E93 Maribor-Trieste, tolls increased: Maribor-Celje—cars up to 1700cc, 18 dinars; over 1700cc, D23; car with caravan, D30. Vrhnik-Razdrto—D20; D26; D34.



DRIVE INDEX Cherry- blossom time

MOTORISTS' average monthly mileage is dropping, and there can be little doubt that fuel prices are to blame.

In June of this year, DRIVE's Index motorists drove an average of 746 miles—106 miles less than in the same month last year—so reducing the average monthly mileage for the 12-month period ending June 1979 by 14 miles to 737 miles.

Certainly this contradicts the usual trend for June—but then, this year, June bore the brunt of petrol price rises and restrictions on availability.

Despite the mileage reduction, petrol expenditure compared to last time has gone up 5%, by £8.83 to £296.95 (3.36p per mile). Insurance has also risen (by £1.08 to £55.89), while outgoings on accessories are up by 15% to £14.11.

As a result, total motoring costs have leapt by £10.64 to a record £646.76 since the last issue of DRIVE—a jump of 4pt in the Index to an all-time high of 212. Indeed, in the 12 months ending June, the privilege of owning and running a car cost an average 7.28p per mile.

All of which makes the Datsun Cherry a particularly attractive proposition: it currently tops the league table of fuel stretchers (2.59p a mile), closely followed by the Mini 1000 (2.69p).

At the other end of the scale, the Rover 2000/3500 range is the thirstiest marque in DRIVE's list (4.01p), with the Chrysler Imp (3.98p) and Triumph 2000/PI (3.96p) close behind.

The table also shows that, on average, British (7.23p per mile) and French (7.21p) models are slightly dearer to run than imported cars in general (6.97p). In contrast, Japanese makes are, on average, cheapest to run (6.15p).

Bright note: the expenditure on servicing and repairs, up in March and April, decreased by £1.57 to £176.61 in May and June. As a bonus, oil and 'other' costs remained unchanged.

Now turn to page 34 for further details of running costs for cars up to 10 years old. If you're in the market for a used car, it could help you save money.



COST OF MOTORING: July 1978—June 1979

INDEX Oct 1973 = 100	101	210	212	101	242	167	186	207	212
MONTH-BY-MONTH ANALYSES (all cars) AND ENGINE RATING ANALYSES (post-1969 cars)	Average monthly mileage	Cost per mile (pence)	Petrol	Oil	Servicing repairs	Accessories	Insurance	Other costs	TOTAL
July 1978	813	6.55	24.92	0.89	14.19	0.31	4.41	8.50	53.22
August 1978	872	5.91	25.64	0.78	10.42	1.03	4.51	9.13	51.52
September 1978	798	6.56	23.27	0.84	15.08	0.65	4.45	8.02	52.31
October 1978	807	6.20	24.49	0.64	12.77	0.70	4.58	6.88	50.05
November 1978	784	6.88	24.72	0.54	15.01	0.38	4.60	8.68	53.94
December 1978	649	7.97	23.12	1.70	14.14	0.58	4.60	7.59	51.73
January 1979	579	7.98	19.54	0.40	12.49	2.00	4.61	7.15	46.18
February 1979	644	7.33	22.85	0.71	10.12	0.23	4.72	8.54	47.17
March 1979	686	8.75	24.53	0.70	20.41	2.15	4.79	7.39	59.98
April 1979	771	7.86	25.80	0.85	20.11	2.05	4.80	7.03	60.63
May 1979	733	8.02	27.05	0.92	17.01	1.61	4.86	7.30	58.75
June 1979	746	8.21	31.02	0.84	14.86	2.42	4.96	7.18	61.28
TOTAL (for year)	737	7.28	296.95	9.81	176.61	14.11	55.89	93.39	646.76
—900cc	551	6.34	15.55	0.68	8.29	0.30	4.19	5.93	34.94
901–1100cc	599	7.59	18.73	0.48	13.25	0.99	4.46	7.59	45.50
1101–1300cc	739	6.84	23.37	0.66	13.26	1.22	4.59	7.41	50.51
1301–1500cc	717	7.18	23.06	0.76	14.55	1.09	4.71	7.29	51.46
1501–1700cc	928	6.95	32.70	0.65	16.30	1.79	5.10	7.95	64.49
1701cc +	931	7.12	33.87	1.22	15.87	1.27	5.89	8.21	66.33
MODEL-BY-MODEL ANALYSES (post-1969 cars)									
Austin Morris Mini 850	548	5.88	15.93	0.29	4.68	0.89	4.00	6.42	32.21
Mini 1000	527	7.00	14.19	0.26	10.44	1.02	4.20	6.77	36.88
1100/1300	562	6.85	17.65	0.93	9.11	0.33	4.09	6.43	38.54
Allegro	749	5.67	23.95	0.84	5.26	0.66	4.60	7.16	42.47
Maxi 1500/1750	719	8.74	26.37	0.82	23.10	0.62	4.68	7.28	62.87
Marina 1300	759	6.82	24.44	0.48	13.65	1.32	4.34	7.56	51.79
Marina 1800	900	8.07	29.98	0.51	27.46	2.09	4.91	7.63	72.58
1800/2200	600	9.27	21.24	1.48	20.75	2.92	3.84	5.35	55.58
Princess	1035	6.35	39.70	0.14	12.05	0.00	5.18	8.62	65.71
Chrysler/Talbot Imp	407	8.60	16.22	0.98	8.26	0.00	3.56	5.98	34.99
Avenger	706	8.09	24.89	0.36	18.84	0.66	4.35	7.53	57.13
Hunter 1500/1750	842	7.82	26.75	0.54	23.84	1.66	4.26	8.80	65.85
Datsun Cherry	723	5.30	18.71	0.53	6.71	0.51	5.25	6.59	38.30
Sunny	690	6.32	22.31	0.50	8.23	0.75	5.56	6.28	43.63
Fiat 128/124	699	5.50	21.06	0.47	5.03	0.00	5.25	6.62	38.43
500/127	440	8.49	13.72	0.10	13.22	0.00	4.45	5.88	37.37
Ford Escort 1100/Popular	658	8.70	23.10	0.57	20.59	0.49	4.32	8.18	57.25
Escort 1300	776	8.56	27.28	0.46	23.07	3.84	4.66	7.17	66.48
Cortina 1300	867	6.02	28.08	0.69	11.29	0.49	4.20	7.43	52.18
Cortina 1600	1042	6.86	34.41	0.49	20.53	3.32	4.75	8.03	71.53
Cortina 2000	1030	6.12	34.82	0.81	12.34	0.96	5.83	8.34	63.10
Capri 1600	754	7.51	28.39	0.66	11.94	1.32	5.19	9.14	56.64
Granada/Consul	1199	6.47	45.86	1.29	16.85	0.02	6.04	7.58	77.64
Rover 2000/3500	841	8.20	33.72	0.69	21.87	0.12	5.95	6.61	68.96
Triumph Toledo/Dolomite	660	6.96	22.91	0.71	7.27	3.69	4.84	6.53	45.95
Triumph 2000/PI	823	8.04	32.61	0.89	20.23	0.26	5.84	6.33	66.16
Simca 1000/1100	522	8.98	19.11	0.69	15.50	1.28	4.27	6.08	46.93
Vauxhall Viva	709	7.05	21.26	0.80	14.76	0.15	4.26	8.75	49.98
Chevette	829	5.47	23.51	0.72	4.14	4.20	4.59	8.21	43.27
Cavalier	1174	5.48	37.78	0.56	10.55	0.63	5.52	9.26	64.30
VW Beetle	543	7.28	19.43	0.45	7.29	0.00	4.06	8.30	39.53
Golf/Polo	726	5.90	25.72	0.65	3.84	0.25	5.15	7.18	42.79
All Chrysler UK	764	7.38	25.69	0.84	16.53	0.98	4.40	7.95	56.39
Ford	886	7.12	30.52	0.65	17.22	1.93	4.90	7.90	63.12
Leyland	702	7.48	24.04	0.91	14.42	1.19	4.73	7.22	52.51
Vauxhall	812	6.78	25.42	0.89	14.98	0.85	4.55	8.35	55.04
All British	783	7.23	26.45	0.81	15.57	1.35	4.73	7.69	56.60
All Fiat	651	6.69	20.80	0.39	9.95	0.02	5.24	7.18	43.58
Renault	752	7.19	22.69	0.49	18.40	0.12	5.08	7.28	54.06
Simca	518	8.80	19.54	0.52	14.04	0.96	4.50	6.07	45.63
Volvo	649	9.14	28.23	0.44	14.41	0.90	7.07	8.29	59.34
All French	754	7.21	23.39	0.50	16.86	1.43	5.12	7.06	54.36
Italian	643	6.92	22.11	0.39	8.99	0.04	5.62	7.33	44.48
Japanese	791	6.15	25.04	0.84	9.59	0.27	5.85	7.01	48.60
W German	808	7.05	28.34	0.50	13.16	1.68	5.61	7.69	56.98
All Foreign	748	6.97	24.98	0.57	12.66	1.07	5.57	7.28	52.13

Average monthly costs (£) excluding depreciation

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Interest on amount of loan: 1-2 years—12.5% flat for each 12 months 3-5 years—13% flat for each 12 months.

Amount of Loan	12 Months True Interest 24.5% p.a.			24 Months True Interest 24.5% p.a.			36 Months True Interest 25% p.a.			48 Months True Interest 24% p.a.			60 Months True Interest 23% p.a.		
	Total Repayable	Interest	Mnthly Pay.	Total Repayable	Interest	Mnthly Pay.	Total Repayable	Interest	Mnthly Pay.	Total Repayable	Interest	Mnthly Pay.	Total Repayable	Interest	Mnthly Pay.
	a	b	c	a	b	c	a	b	c	a	b	c	a	b	c
£	£ p	£ p	£ p	£ p	£ p	£ p	£ p	£ p	£ p	£ p	£ p	£ p	£ p	£ p	£ p
200	225.00	25.00	18.75	250.08	50.08	10.42	277.92	77.92	7.72	303.84	103.84	6.33	330.00	130.00	5.50
300	337.56	37.56	28.13	375.12	75.12	15.63	416.88	116.88	11.58	456.00	156.00	9.50	495.00	195.00	8.25
400	450.00	50.00	37.50	499.92	99.92	20.83	555.84	155.84	15.44	608.16	208.16	12.67	660.00	260.00	11.00
500	562.56	62.56	46.88	624.96	124.96	26.04	695.16	195.16	19.31	759.84	259.84	15.83	825.00	325.00	13.75
600	675.00	75.00	56.25	750.00	150.00	31.25	834.12	234.12	23.17	912.00	312.00	19.00	990.00	390.00	16.50
700	787.56	87.56	65.63	875.04	175.04	36.46	973.08	273.08	27.03	1,064.16	364.16	22.17	1,155.00	455.00	19.25
800	900.00	100.00	75.00	1,000.08	200.08	41.67	1,112.04	312.04	30.89	1,215.84	415.84	25.33	1,320.00	520.00	22.00
900	1,012.56	112.56	84.38	1,125.12	225.12	46.88	1,251.00	351.00	34.75	1,368.00	468.00	28.50	1,485.00	585.00	24.75
1,000	1,125.00	125.00	93.75	1,249.92	249.92	52.08	1,389.96	389.96	38.61	1,520.16	520.16	31.67	1,650.00	650.00	27.50

For loans in excess of £1,000, total repayable, interest and monthly payment are pro rata. Rates at 1st November 1979.



Use this form to get your cheque quicker

To apply for your AA Members Loan complete this form and post to
Mercantile Credit, FREEPOST, P.O. Box No. 75, London WC2B 5XA.

Name (Mr/Miss/Mrs)

First Names

Address

Postcode

How long at your present address

years

Tel. no.

*Owner/Tenant *House/Flat/Rooms/Living with parents

Are you in good health? YES/NO *Married/Single *Delete as applicable

Date of Birth

Number of dependent children

Profession or trade

Name of employer

Business Address

How long in their employ?

Bankers

Bankers' address (in full)

Do you have a Barclaycard?

YES/NO

For office use only

DEPT.

SERIAL NO.

CHECK DIGIT

Occ. Code

Do you have present or previous transaction with the Mercantile Credit group?
If so please state account number.

Purpose of new loan (give details)

Total cost of goods or service

£

Amount of cash required now

£

Repayment period required

months

AA Membership No.

Average net monthly take-home pay (i.e. after deduction of
Income Tax, N.H.I. Contributions etc.)

£

monthly

Please submit your latest P60 or other annual advice or at least two monthly/
weekly pay slips.

Any other income

£

monthly

(Give details)

Mortgage payments/Rent

£

monthly

Total of current hire purchase and credit
payments

£

monthly

Any other regular payments

£

monthly

(Give details)

I/we submit this proposal to you for a loan of £ _____ and I/we warrant the accuracy of the replies. You may make all enquiries necessary to enable you to consider this application and from time to time disclose to the National Credit Register details in respect of this transaction excluding any information relating to income. If you need to clarify any information, in the application form, or obtain my agreement to the amendment of any documents, please regard this as a formal request to visit me at my home. It is understood that you reserve the right to decline this application without stating a reason. Membership of the Automobile Association or a previous or current account with Mercantile Credit do not of themselves ensure acceptance.

SIGNATURE

DATE

713



Cost-cutter's Curriculum Part 2

Reasons to be cheerful—part two of DRIVE's top 40 hints on saving fuel, money, time and temper. They'll set you whistling all the way to the bank

Cover up



Insurance is one of those bills that hurts—a major expense with little to see for your money. Savings of up to £40 a year can be made by shopping around for your annual policy, without sacrificing any cover benefits. January to March can be good months to catch insurers prior to premium rises. And don't stick with just one company—shop around (or ask your broker) at every renewal time, especially when you buy a new car. Worthwhile savings can be made on comprehensive policies by restricting driving to named persons and/or accepting a voluntary damage excess, *but be prepared to have to pay it when it comes to the crunch.*

New for old

Many car parts, such as starters, alternators and cylinder heads, are reconditioned, and can be bought in part-exchange far more cheaply than buying new. And safely, too, if the rebuilt unit comes from a reputable company



offering a guarantee. Best bet is the original manufacturer, such as Lucas for electrical units, Girling and Lockheed for brake parts, Leyland and Ford for exchange engines.

Question of cost

When the car is sick, take your first reaction to the garage estimate—a gasp, no doubt—a stage further: question how the job is to be done. Garages may often bolt on expensive new parts, when reconditioned units or a simple repair would be pounds cheaper. Dynamo and alternator repairs are a case in point: too many garages will cheerfully sell a new part, when a few pence for a simple brush replacement would put the car back on the road. Check time estimates, too: some garages may time the job for complete replacement, while replacing only a part of the system.

Low finance



You can't get tax relief on loans for buying cars, but you can on home-improvement loans. So, if you're contemplating house projects at the same time as buying a car, try to put down as much cash as you can on the car and borrow as much as possible for the house. Shop around for finance, too: many car dealers and manufacturers offer lower interest terms than banks or finance houses; scan the local press for details of these (often short-term) offers. And base your comparisons on true annual rates of interest—companies are obliged by law to disclose these.

Charging up

Most-abused part of the car is the battery, and only a little care is needed to lengthen its life from two to five years. Basic maintenance is a fortnightly check to keep the cells topped up to the marked level with distilled or de-ionised water, and see that the terminals are securely clamped by the lead connectors—keep these free from corrosion by a heavy smear of petroleum jelly. When starting the car, churn the starter for a maximum of five seconds at a time, giving the battery a few seconds' rest between each burst. Never flatten the battery by starting—if you suspect it is one



degree under, charge it fully. Never leave a flat battery in the car—every day uncharged knocks months off its life.

Clutch on life

Even lightly resting your foot on the clutch pedal can cause unnecessary and expensive damage to the release bearing and the clutch itself; minimise, too, the time spent holding the car on the clutch on gradients—that's what the handbrake is for.

Petty cash

Don't neglect the small savings. Buy big bottles, rather than individual sachets, of screen-clean, waxes, battery top-up water, antifreeze, upholstery cleaning solvents—you'll save pounds and pounds over the years.

Dirty hands = clear savings

The lion's share of a garage bill is for labour, charged at £6–10 an hour. In DRIVE's Index of Motoring Costs, service and repairs cost the average motorist £160 a year; ergo, there's up to £100 a year going for the owner prepared to don overalls and tackle the nitty-gritty of DIY.



Start simple: a course of car maintenance evening classes—good value at about £5 a term—and a workshop manual—a blue-chip investment at around £4—will soon have you changing

sparkplugs and oil, and sprucing up chipped paintwork; grow in confidence to tackle ignition tune-ups, bolt-on repairs, accessory fitting and—when skilled—brake adjustment. A basic toolkit meets most modern cars' needs—the AA Mechanics' Tool Roll at £22.95 has a typical selection of items. Remember, too, that DIY means that you can buy parts from specialist stockists at considerable discount. But watch out for dodgy cheapies—see *In a Spin*, DRIVE March–April 1979.

Strictly for hire

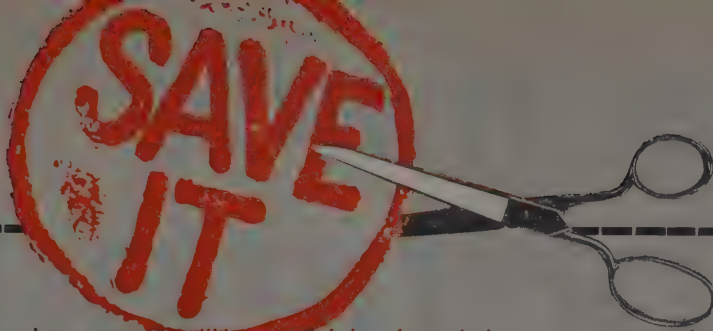
There's always the odd big job you feel you could tackle if only the right tools were available.



Well, they are—at tool-hire shops (see *Yellow Pages*). The most commonly needed items—hub pullers, engine hoists, bearing pullers, valve compressors and welders—are all on offer at surprisingly cheap daily or weekly rates. Some specialist shops have complete ranges of manufacturers' tools for particular models of car; some offer reduced weekend rates for the keen amateur. A typical weekend respraying a wing could cost you £3 for paint, £1 for thinners, wet-and-dry paper and tack-cloths, plus £8.50 for hire of compressor and spray gun—total £12.50. Typical garage charge £40; saving £27.50.

Gold in the hills

There are savings galore in non-safety-related spares from the mountains of wrecks at scrapyards—body panels, generators, wiper motors and other parts can be markedly cheaper than new or reconditioned items, if you know what you are looking for. Some reputable scrap dealers (often members of the Motor Vehicle



Dismantlers Association) take the cars apart themselves, so you can buy bits 'off the shelf'; or you might have to forage, using your own toolkit to remove a part from a wreck. You won't get a guarantee, but, if the part doesn't work, most dealers will give you a replacement or your money back. Scrapyards are surprisingly knowledgeable about their stocks, so ringing beforehand may save a fruitless and time-wasting search.

Economy Avenue



With really good tools and instruments, regular services and repairs are a doddle; but items such as a trolley jack, diagnostic instruments and a torque wrench are beyond most pockets. That's when the 'tool pool' makes sense—banding together with neighbours or friends to buy a set of tools that everyone can use. And you can take the scheme a stage further by swapping your skills as an amateur mechanic for those of a keen house decorator, gardener, electrician and so on.

False economy

Some cars seem to run forever without even the need for a drop of oil, so why pay out on servicing? Well, short-term economies can turn into long-term expense or danger—that's why. Binding brakes, for example, cost fuel—so tip-top adjustment saves petrol as well as lives.

Smash hit

A flash and a crash—and your new windscreen could cost at least



£50. The clever motorist will have an insurance policy that allows claims for windscreen breakages without affecting his no-claims discount. But, if you're forking out yourself, shop around before buying the new screen. We're happy to report that most of the disaster-haunting windscreen-replacement vans you see skulking on roadsides give excellent fast service at a price equalling and sometimes undercutting dealer prices—after all their workshop costs are considerably lower. Make sure you get the right tint of screen—unmatched glass could affect the car's resale value.

Steel yourself

That dry rustling sound from the pinhole in your silencer is the sound of money dribbling away—it's wasting fuel, and the eventual new system could bring home a £50 bill. A mild-steel exhaust will last about two years, with luck, and there's little a car owner can do to extend that. But, if you



are considering keeping the car for some six or eight years, you could save over that period by buying a stainless-steel replacement—it will cost twice as much, but have a minimum guarantee of five years (some for the car's lifetime). Even if you don't see out the life of the system, you should be able to recover some of the outlay on resale. Cheaper than stainless steel, yet lasting up to twice as long as conventional mild-steel systems, are aluminised exhausts—a worthwhile buy for the owner intending to keep a car for longer than average.

First cut is deepest

Drive your new car off the garage forecourt and, anaesthetised by pride of possession, you'll probably forget its value has dropped up to 10% the moment you handed over the cheque. There are cars that manage to do considerably better than others in

fighting depreciation; DRIVE's car test facts show the full horror of this hidden expense—although the Range Rover even appreciates.

SECONDHAND Review

But you can miss most of the first year's depreciation by watching out for nearly-new secondhand cars. You may not get exactly the model or colour you want, but the ability to sell it a year or two later at the same price as you bought it does wonders for your colour sense! You will have to watch that the car has not been sold because it's a 'tea-break special'—the rogue car that just never goes right—or that it is not a re-built write-off; an AA inspection is worth countless salesmen's assurances. Choose well, and you may get a car that is over the worst of its teething troubles, and with a few months of warranty protection still to go.

Sales pitch

When it has to go—sell it yourself. A dealer has to add to the price he pays you the costs of bulling the car into salesroom glamour, loss of interest on his capital outlay, his commission, and a profit margin of more than 10%—and then sell at the market price. Even a trade-in price is likely to be subsidised by the discount he is



prepared to forego on the sale of a new car to you—a discount you can possibly earn by having no trade-in. So you might make money on both sides of the deal, even if you pitch the private-sale price £100–£200 below forecourt prices. To help you wade through

the balance sheet, consult DRIVE's used-car price guide (page 64) and keep your eyes open for locally advertised prices.

Allay decay

The second-worst menace to secondhand values—after depreciation—is rust. Alfa Romeo and Lancia have earned justifiably bad reputations; Volkswagen, Vauxhall and Volvo must be counted among the best. Respectable anti-rust treatments such as Ziebart will almost repay a new-car buyer over four to five years, if only by enhancing the trade-in price. To prolong active life on a non-protected car: regularly hose down the underside of the car in the winter; don't garage a wet car in an unventilated garage; immediately retouch any scratches in the paintwork with a full set of anti-corrosive layers—zinc or other anti-rust paint, filler, primer and topcoat; and immediately renew any flaked or lifted patches of underbody sealant.

Pretty-up the price



You may be able to influence your car's secondhand resale price—especially on a private sale—by some purely cosmetic DIY. Hazy or patchily discoloured paintwork can be brought to its original sheen and tone by using commercial mild-abrasive fluids, such as T-Cut, and a lot of elbow grease. If you haven't religiously touched-up paint scratches, now's the time. Thoroughly vacuum out the interior, use contact adhesive to stick back curled carpet patches, and clean down upholstery with a proprietary solvent such as Decosol. For many popular cars, you can buy exchange rechromed bumpers quite cheaply—Serck Services is one supplier—and the cheapest glamour job of all is an aerosol repaint of silvered wheels and lick of tyre paint on the sidewalls.

What made us bring out a new battery this Oct

Not to mention last February, March and April, which were followed by the latest, wettest spring since 1783.

A lot of motorists were let down by their batteries, either because the cold and damp had got to the cheaper ones.

Or because they had forgotten to top up the more expensive ones.

All this has prompted us to bring out a new range of top-quality batteries for British and foreign cars, vans, trucks and tractors.

They're made to the highest specifications for cold-weather starting. And they're low-maintenance, so you only have to check them every 12 to 15 months or every 15,000 miles.

(Of course, that's subject to



the correct vehicle application and Voltage Regulator Settings, i.e. a maximum of 14.4 volts.)

In other words, you can forget about them from one freezing winter to the next.

There are 3 versions. Premium and Premium DIY have 2-year guarantees while value-for-money Economy is guaranteed for one year.

Y ober?

January.

Whatever happens this winter, your Unipart battery will easily see you through it. And you'll see some pretty chilling reminders as to why you bought it.

In fact, just about the only way it will make you late for work is if you stop to help someone start his car by jump-lead.

Buy one before winter. It could stop your car turning into an igloo.

Thousands of parts **UNIPART** for millions of cars.



Ford Cortina 1600L

Price £4006 On the road £4126



It was in September 1962 that the word Cortina began to mean something other than a fairly remote holiday resort. The car was a winner for Ford from the word go, and three major styling changes, with a minor facelift and technical tidy-up at half time for each, have done nothing to dim its success. In fact, since the Mark IV's launch in the autumn of 1976, the Cortina has continued to outsell any other model on the British market (except Ford's own Escort) by at least two to one.

Ford, however, has not let the teenager rest on its laurels. The new Cortina 80, as it's becoming known, incorporates a series of minor styling changes and highly significant underbody and under-bonnet mods that, the company claims, improve performance yet cut fuel consumption. It really does sound like a Dagenham fairy tale. Are you sitting comfortably? Then we'll begin.

How it goes

The latest Cortina 1600 still uses Pinto-power—Ford's 1593cc unit with its toothed-belt-driven overhead camshaft—but appendages, such as carburettor and cooling fan, are new, and therein lies the new car's claim to fame. For the technical, the Ford carburettor has a variable-bore choke tube, with a taper-needed, variable main jet and 'sonic-idle' slow-running jet, plus—for the first time on a Cortina—pre-heating of the induction air. The cooling fan's novelty is a fluid-drive arrangement from the usual pulley, to ensure that it revolves fast and absorbs power only when conditions demand. Revised piston rings also reduce friction.

That's what it is, but what does it do? In short, everything that Ford promises. We tested both standard and 'economy' versions of the Mark IV Cortina in late 1976, so we can make direct three-way comparisons: this new version is not only quicker than the standard version tested then, but 3½mpg more frugal than even the yawningly slow 'economy' version, too. Unlike previous 'economy' Fords that saved fuel only by robbing you of power, this is the first serious attempt to improve the basic efficiency of an existing power unit—and it works.

The figures for the 1976, 1976-economy and 1980 Cortinas are as follows:

	'76	'76E	'80
Max speed—mph	89	86	91
0–60mph—sec	15.3	18.0	14.6
top-gear 30–50mph	12.8	12.8	11.5
top-gear 50–70mph	18.3	19.4	14.6
Overall mpg	27	30	33.5

Mind you, it has to be admitted

that even these performance gains are not enough to keep this standard-tune Cortina ahead—or even up with—many of its market rivals, but the Cortina's improved top-gear response makes it better than most to drive in traffic.

When we first received them, our two test cars were very snatchy and unwilling to pull away from cold, but, once we had enriched their idling systems to a still comfortably 'legal' setting, all became smoothness and ease. The new carburettor's automatic choke sets itself while parked—you just jump in and turn the key—but it pays to pause a few seconds before driving off, to allow the intake air to warm up. Otherwise, it idles slowly and easily at all times.

Ford's perennial delight has been its gear changes, and, despite some mild notchiness, the latest Cortina's remains impeccable. The clutch seems more progressive—although the pedal travel is still too long, despite the adoption of automatic adjustment—and it can just handle a 1-in-3 hill restart.

The control layout appears much as before, except for a revised centre console and a lowered radio siting to make room for an additional pair of fascia ventilators. The front seats, however, have been redesigned to offer better support and to hold their shape longer—apparently, Ford used burly policemen to develop them. We offer no resistance—they

HOW GOOD

At-a-glance

DRIVE's verdict on the Ford Cortina 1600L, taking into consideration its rivals, its price and what kind of car it's *meant* to be

Out of 10

PERFORMANCE

●●●●●

FUEL ECONOMY

●●●●●●●●

HANDLING/STEERING

●●●●●●

COMFORT/REFINEMENT

●●●●●

INTERIOR/BOOT SPACE

●●●●●●

PASSENGER AIDS

●●●●●

DRIVER AIDS

●●●●●●

ACCIDENT/INJURY SAFEGUARDS

●●●●●●

RUST RESISTANCE

●●●●●

RELIABILITY/EASE OF REPAIR

●●●●●●●●

really do make the driver's lot a happier one on long journeys. A pity, though, that seating is so low—shorter people complained about having to peer over seats and window ledges.

Previous quibbles about the Cortina's dipswitch and awkward light-stalk location are unremedied, too, and the sun visors seem too shallow and don't swivel sideways; but both driving mirrors are excellent, as is the driver's rearward view through the new, deeper glass areas. There's an unwelcome unswept area left by the wipers beside the driver's screen pillar, though, and Ford doesn't seem able to make up its mind about speedo calibration—the latest version is back to 5mph graduations, all the way to 140mph. Is there a turbo version on the way?

Revised spring rates and the adoption of gas-filled rear dampers are the only suspension changes, but the latest Cortina does corner quite well. It is heavily stabilised against roll, and the more-astute will sense the effects of this in other ways, too: the steering feels imprecise and its straight-line vagueness doesn't inspire much enthusiasm, though there is plenty of cornering grip and good feel, even on a wet road.

How comfortable

The Cortina is one of those cars in which the handling is limited by the ride: on all except the smoothest roads, the pitch and wobble—albeit tautly elastic—hardly confers confidence on the driver who cares about fine control. Driving a Ford Fiesta after the Cortina illustrates the point nicely: the smaller, front-wheel-drive offering shows how it should be done. The Cortina's soggy ride doesn't upset passengers because they are well insulated from bad road shocks, and, over really rough going, the car makes a good showing. It's the ordinary minor imperfections, typical of the British main road, that sets the jelly wobbling.

Even with the new, slightly increased door height, the Cortina still isn't the easiest of saloons to enter, and the L's seating hardly cossets rear passengers. Fundamentally, the cushion is too low for real comfort or a decent view out, though legroom is generous. There's a prominent floor hump, but no armrest in the centre, and those on the doors are hard and unimaginative.

Heating doesn't really get to rear occupants' feet as it used to in the days of the Mark II Cortina, but our severest criticism is that exhaust fumes still tend to be sucked into the car if a window is lowered—a fault that has been lurking around Cortinas since the Mark III first appeared in 1970.

With windows shut, ventilation



FORD CORTINA 1600L

Front engine: 1593cc/4cyl, OHC (belt); one Ford vari-jet carb; 75bhp at 5500rpm
Rear drive: 4 gears; 17.3mph/1000rpm
Suspension: front—ind double wishbones, coil springs, anti-roll bar; rear—coil-sprung live axle, four links and anti-roll bar; gas-filled dampers
Steering: rack and pinion, 3½ turns/34ft circle; 4½J wheels, 165SR13 radials
Brakes: servoed discs front/drums rear

Parts/repairs (inc VAT)
clutch £34.06 (fitting times not yet fixed)
exhaust £44.74
headlamp unit £29.17
front bumper £24.50
laminated windscreen £39.96
oil filter and points £5.10
major service 12,000 miles

	per year	per mile
Running costs	£757	6.3p
Loss of value	£9	.07p
Total depreciation	£827	6.89p
Insurance group	3	

HOW IT COMPARES

Ford Cortina 1600L

VW Passat GLS

Vauxhall Cavalier 1600L 4-door

Morris Marina 1700L

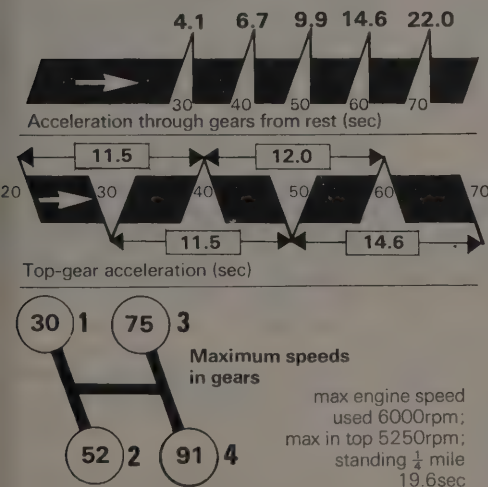
Honda Accord 4-door

Teenage vamp

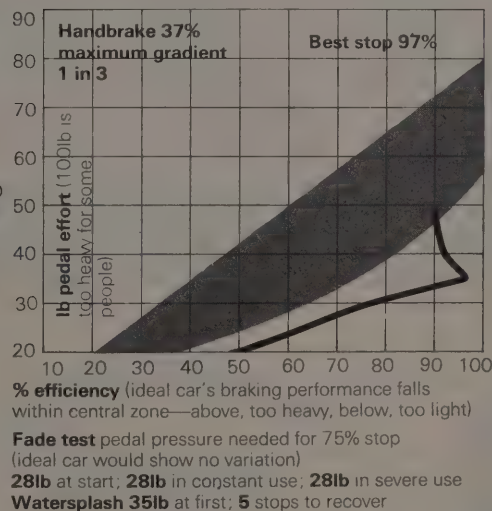


Ian Dawson

PERFORMANCE



BRAKES—pedal pressures and responses



FUEL 4-star/97 octane min overall consumption 33 $\frac{1}{2}$ mpg effective tank range 335 miles/10gal

Normal range of consumption

hard driving, heavy traffic	27mpg
short journey, suburban	28mpg
motorway—70mph cruising	29 $\frac{1}{2}$ mpg
mixed roads—brisk, 50mph cruising	35 $\frac{1}{2}$ mpg
quiet rural—40mph cruising	41mpg

Consumption at steady speeds

30mph	48mpg
56mph	35 $\frac{1}{2}$ mpg
70mph	29 $\frac{1}{2}$ mpg
max mph	19 $\frac{1}{2}$ mpg

SAFETY CHECKS O = factory fitted option

steering: energy absorbing?	Yes	hazard warning: fitted?	Yes
front seats: secure mounts?	Yes	interior: well padded?	No
head restraint?	O	w/screen: laminated?	Yes
front belts: effective?	Yes	doors: crashproof?	Yes
convenient?	Yes	childproof?	Yes
rear belts: fitted?	No	petrol: spillproof?	No
		brakes: failsafe?	Yes
		load sensitive?	No

ON-ROAD PRICE (£)	CAPACITY (CC)	FUEL OVERALL (MPG)	MAXIMUM SPEED (MPH)	0-60MPH (SEC)	30-50MPH IN TOP (SEC)	BEST STOP (% g/lb)	OVERALL LENGTH (FT/IN)	MAXIMUM LEGROOM FRONT (IN)	TYPICAL LEGROOM REAR (IN)	STEERING TURNS/ CIRCLE (FT)
4128	1593	33 $\frac{1}{2}$	91	14.6	11.5	97/35	14' 3"	41	39	3 $\frac{1}{2}$ /34
5312	1588	35 $\frac{1}{2}$	100	12.0	10.6	100/60	14' 1"	39 $\frac{1}{2}$	37	4/31 $\frac{1}{2}$
4169	1584	29 $\frac{1}{2}$	96	12.6	11.3	97/50	14' 7"	40 $\frac{1}{2}$	37 $\frac{3}{4}$	4 $\frac{1}{2}$ /32
3971	1700	29 $\frac{1}{2}$	94	14.0	10.7	94/70	14' 0 $\frac{1}{2}$ "	38 $\frac{1}{2}$	39	3 $\frac{3}{4}$ /33 $\frac{1}{2}$
4488	1602	35	93	14.0	9.8 (4th)	88/40	14' 3"	40	37 $\frac{1}{2}$	3 $\frac{1}{2}$ /34 $\frac{1}{2}$

4th—4th gear

and heating are both clean and powerful. Air blending gives instant temperature control, and the booster fan is commendably quiet at lower speeds. The new vent—a central 'chip cutter'—would benefit from a little more stiffness in adjustment, but the output is generous, backed up by the outboard pair in summer. The outer vents are tied to the heater's temperature—good for rapid door-window demisting in cold weather. A heated rear window is standard.

The biggest impediment to the new model's luggage capacity is its spare-wheel location—stowed flat beneath a thin plastic floor covering: cases wobble about on top, and load height is distinctly limited. Worse, everything in the boot must be unloaded in the event of a puncture. Add to this the fact that no boot lamp is provided on L versions, and that one has to use the single all-purpose key to open the lid every time, and you can see why all those travelling salesmen hang their suits from the interior grab handle...

Inside the car, too, oddments space is distinctly limited, though this is helped a little by the recesses in the centre console, and seems better on GL and Ghia versions.

The trimming inside the L is durable, but a trifle clinical for our taste—the carpets are obviously synthetic, and there's painted metal on view on the lower fascia.

Refinement, like beauty, is a relative quality, and, though we don't rate the latest Cortina 1600 as a paragon of mechanical manners, it's certainly a big improvement on earlier versions. The transmission vibration no longer pummels its way into the interior, though there is more than a hint of it around 50mph, and the engine pulls roughly through a period around 30mph that makes you change down—until you discover it's smoother at 25mph! The final exhaust boom period sets in at an indicated 71mph, which seems a happy legal coincidence... until we established that this was a true 67mph.

Stepping on the gas away from street kerbs can cause the engine



to surge at times, but, generally, town manners are very good—the steering, for example, is never too unwieldy.

How strong

We disliked the primitive inertia-type starter motor on our test car—that's the noisy sort that tends to whirr out of engagement—but this seems to be a case of the luck of the draw with modern Fords: you get different starters, alternators and distributors, depending on when and where the cars were built. Our choice would be a Bosch distributor, a Lucas alternator and a pre-engaging starter.

Underbonnet, we are pleased to see the introduction of an expansion tank on the radiator; a self-adjusting clutch and easy brake-lining inspection without wheel removal are further moves to extend service intervals.

The most significant innovations, however, concern rust protection. Ford has been 'making do' with its electro-phoretic priming process for too long, and the introduction of extended warranties by one or two rivals to back up their more-stringent anti-rust measures seems to have convinced the American giant at long last that this could be a sales feature.

That's why the new Cortina goes through four new stages in the body shop, adding a pvc stone-chip guard under door sills and rear wheels, wax injection into box sections, and a final underbody wax coating. However, past experience has taught us that

describing the process is one thing—getting the stuff properly applied is another. We'll wait a bit and see.

A redeeming feature of the Cortina L is the absence of the water-trapping trappings that embellish the more-expensive models. This also makes the car easier to wash, although the amount of filth thrown from the wheels against the contoured body flanks is only too apparent. The interior is very wipeable, but there's no question of being able to remove carpets for cleaning.

How safe

Our cornering Cortina 1600 felt very safe on its modest 165-section radials, losing its grip only steadily and progressively, which gives the driver plenty of warning before things get out of hand. For some strange reason, however, brake-servo assistance has become much more intrusive on the latest cars. Being able to stand the car on its nose (or, more likely, skid helplessly) at a mere 40lb pedal pressure is not a good safety feature. Fade and water resistance cannot be faulted, and the car stands handbrake-secure on a 1-in-3 hill. A hydraulic-failure warning lamp is now mounted on the fascia, with an integral check button to let you ensure that it is working properly.

Several other changes to this revised model improve its safety qualities, too: red foglamps are incorporated in rear lamp clusters that, like the front ones, now wrap round so that they can be seen in profile. Bumpers, too, have elongated plastic end-caps that protect the car's flanks.

All Cortinas (even the base model) now have laminated windcreens—an excellent safety feature—and Volvo-style see-through head restraints are standard on GLs and Ghias—an extra on our L. Inertia seatbelt clasps integrated into the front seats are both safer and more convenient, but we are surprised that the new backrests are not more firmly lined to prevent occupants receiving an unrestrained rear occupant's knee in the back in a collision; the absence of padding

along the Cortina's top screen rail is another serious omission.

How much

Any revised model that goes faster on less fuel deserves a plaudit, and, in every type of use, present-Cortina owners are in for a pleasant surprise if they change to the new model. Longer drives yield an easy 35mpg, and it takes really hard driving or short journeys to get the figure down to the level of yesterday's 1600. While this new Ford is not quite as abstemious as the best medium-sized cars, it's probably the best of British.

Running costs, however, are more than petrol bills, and, in overall terms, this Cortina seems set fair to remain Britain's favourite fleet car: its spares remain cheaper than Continental challengers', and its low insurance and depreciation are unassailable, too. And, if the underbody protection makes a proper job of rust resistance, it could be more popular than ever—new or second-hand—among practical motorists.

The Cortina certainly remains an undemanding DIY proposition, with the latest technical changes doing nothing but good for front-garden mechanics—who will also find that the extended service intervals give them more time to mow the lawn! More's the pity, therefore, that Ford doesn't provide more ready guidance about maintenance: its 'operating guide' is fine for forecourt checks, but little else.

Our car had an ideal oil consumption of around 1750 miles per pint, and, although the final $\frac{3}{4}$ gal of petrol takes ages to gurgle in, it is not intended that you fill this expansion chamber.

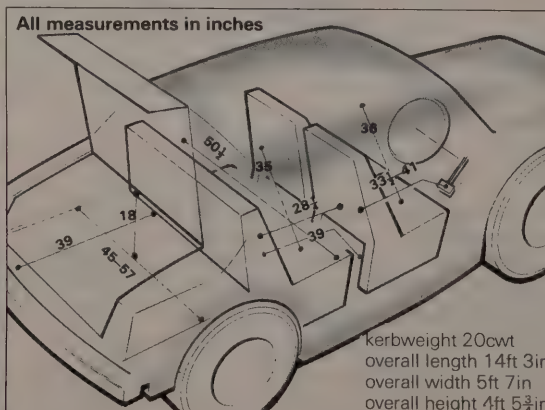
Verdict

The new Cortina's manners do not impress us as much as its credentials. It has a competent but colourless way of going about things that leaves more discerning and demanding users less than satisfied. Its ride, in particular, leaves a lot to be desired, and the improved front seats make the back ones very second-best.

Nevertheless, Ford is to be congratulated on managing such an improved set of performance and economy figures in this latest 1600—this dipsomaniac-to-teetotal conversion is the stuff of Salvation Army songs.

But that one dramatic improvement should not obscure other developments that could equally benefit the owner's pocket: intelligent refinements underbonnet and in maintenance requirements, plus conscientious rust protection could matter just as much in the long term.

The ending of the fairy tale? Well, all the new Cortinas should live happily, if not ever after, at least a good bit longer.



WE'RE SELLING A LOT OF FOREIGN CARS ON THE SIDE.



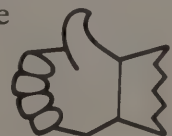
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Alfa Romeo Giulietta 1.6

Price £4844 On the road £4895

Brussels' bureaucrats may deny it, the Commission for Racial Equality might not like it, but it is difficult not to see national characteristics in European cars.

French motors ooze bonhomie and soporific comfort; with the Germans, it's all rigorous quality control and equally uncompromising seats. The Italians' sense of elegance can be matched by an urgency and impatience that's often realised in their mechanical creations. Alfa Romeo's Giulietta (Romeo's Juliet—get it?) is an example. It could be mistaken for Alfetta-vintage wine in a stylish new bottle, yet it has enough fizz to make even a sober-sided car tester pop his cork...

How it goes

Alfa Romeo's evergreen twin overhead-cam unit is similar to that used in the Alfetta—as is much of the running gear. The Giulietta breathes through a complicated pair of twin-venturi carburettors, bristling with adjustment screws, to produce 109bhp—prolific for a sub-1600cc unit.

We had no trouble starting from cold, but keeping the Alfa running with the right degree of choke takes skill—especially when the choke lever is so obstinate, so hard to see below the fascia and so confusingly similar to the hand-throttle right next door. Using this latter didn't seem to help matters, either...

Once warmed up, the Alfa impresses as much for its docility in traffic as its eagerness when pressed. In acceleration away from rest, our table shows that the Giulietta is quick enough, but its paper promise of a power advantage over rivals such as Audi's 80 is not delivered in practice. Yet, thanks to its low-speed response and five wisely-chosen gear ratios, the Alfa's overtaking is good, especially in fourth. It feels faster than it really is, with a cultured, mechanical snarl that encourages the driver to wind the rev-counter right round to the red-lined 6400 rpm. There's some confusion here—the handbook quotes a maximum speed in each gear that limits revs to about 5600rpm, but, when we tried this, acceleration was compromised.

Sadly, the fun is marred by a soggy gear-change action that one tester described as being as obstinate as an Austin Maxi's, especially down into the lowest ratios and reverse at rest. (Another tester asserted that this was a gross insult to the Maxi's box.) In the quest for balanced fore-and-aft weight distribution, Alfa Romeo has placed the gearbox far from the lever, at the back of the propeller shaft and just ahead of

the final drive. Its theoretical advantages tended to evaporate in the heat of our testers' struggles to accelerate through the gears.

Of course, the benefits of the gearbox placement and sophisticated rear-suspension arrangements emerge when cornering. The use of a costly de Dion layout keeps the rear wheels parallel at all times, helping the tyres to stay in better contact with the road.

The results are convincing: as well as having a smooth, absorbent ride, the Giulietta can take corners at speeds that will raise the hair of inexperienced passengers. More importantly, good steering feel and a tame, even nose-drift when the giddy limit is reached help keep the driver safe.

The steering tends to fight the driver as cornering speeds rise, so a firm grip is needed on the helm. Recommended tyre pressures feel ideal for a well-laden car, but we found that a light-travelling Giulietta benefits from an extra 3psi in the front. Either way, the car is undeterred by crosswinds and bumps.

Alfa's familiar long-arm/short-leg driving position is effectively countered by an adjustable steering column to give one of the best driving positions that we've encountered in an Italian car. Front seat height can be altered by the use of spacers on the runners, fore-and-aft adjustment is very generous, and only the

HOW GOOD

At-a-glance

DRIVE's verdict on the Alfa Romeo Giulietta 1.6, taking into consideration its rivals, its price and what kind of car it's meant to be

Out of 10

PERFORMANCE

●●●●●●●●

FUEL ECONOMY

●●●●●

HANDLING/STEERING

●●●●●●●●

COMFORT/REFINEMENT

●●●●●●●●

INTERIOR/BOOT SPACE

●●●●●●●●

PASSENGER AIDS

●●●●●●●●

DRIVER AIDS

●●●●●●

ACCIDENT/INJURY SAFEGUARDS

●●●●●●●●

RUST RESISTANCE

●●●●●

RELIABILITY/EASE OF REPAIR

●●●●●●

reclining mechanism is awkwardly placed. Even on longer runs, the Giulietta's seat-support proves amenable—if you are prepared to spend some time getting the various adjustments right.

Instrumentation looks somewhat alien, and some minor controls are scattered about, but all are legible, and they work well once you have come to terms with them. We appreciated the telltale lamps for the heater's fan and low fuel-level, and noted that the instruments were all reasonably accurate.

How comfortable

Our passengers had a lot of trouble with the doors: they are awkward to open and need a firm slam to shut. Three keys (none double-sided) keep the driver muttering, too.

Patience with all these frustrations is rewarded by surprising spaciousness, and back-seat legroom as good as the biggest saloons on the market. Seat width is compromised by some wheel-arch intrusion, and headroom is limited, but in general the Giulietta is an excellent proposition for passengers: kickproof plastic entirely protects all door sills; courtesy switches are provided all round; rear occupants have a good centre armrest and pockets for papers on front seat-backs; and everyone has an unusually clear view of the digital clock mounted above the driver's rearview mirror. There were, however, complaints about fixed front-seat head restraints that block the view, and floor-level crossmembers that prevent warmth percolating rearwards.

Heating and ventilation is good when you need only one or the other, but it's impossible to get that warm-feet/cool-face two-tier flow, and the constant draughts in the front footwells are acceptable only in mid-summer.

The trunk-shaped boot's space is limited, but some of our testers prefers cars that put people before suitcases...

Driving comfort is initially marred by a feeling that the gearbox oil has set solid overnight. Once this and the hesitant choke period have passed, the flexible engine pulls contentedly in third and fourth, helping to disguise the gear shift's tiresome operation.

On the open road, the Giulietta is even more impressive, being one of those rare four-cylinder cars that doesn't generate an ear-bashing boom at any speed.

The suspension is equally considerate, too. Despite the Alfa's exuberant, cut-and-thrust cornering ability, it also rides comfortably over rough roads. It's set up so well to cope with potholes that, curiously, the Giulietta impresses least at speed over good, motorway surfaces, when some pitching

ALFA ROMEO GIULIETTA 1.6

Front engine: 1570cc/4cyl, 2 OHC (chain); two twin-venturi carbs, 109bhp at 5600rpm
Rear drive: 5 gears; 18.8mph/1000rpm
Suspension: front—indep wishbones, torsion bars and anti-roll bar; rear—semi-indep de Dion axle, Watt linkage, coil springs, diagonal trailing arms, anti-roll bar.
Steering: rack and pinion, 3 $\frac{3}{4}$ turns/36 $\frac{1}{4}$ ft circle; 5 $\frac{1}{2}$ J wheels, 165SR13 radials
Brakes: servoed discs all round

Parts/repairs (inc VAT)
clutch £99.59 (fitting 3.75hr)
exhaust £92.58 (1.0hr)
headlamp unit £48.88 (0.35hr)
front bumper (3 parts) £89.70 (0.6hr)
laminated windscreen £56.92 (4.5hr)
oil filter and points £5.75 (0.8hr)
major service 12,000 miles (4.75hr)

	per year	per mile
Running costs	£894	7.45p
Loss of value	£326	2.72p
Total depreciation	£1062	8.85p
Insurance group	6	

HOW IT COMPARES

Alfa Romeo Giulietta 1.6

Audi 80GLS

BMW 316

Lancia Beta 2000

Ford Cortina 2000 Ghia

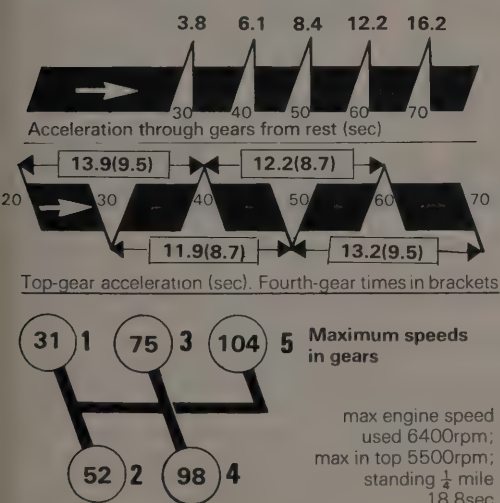


Fast lady

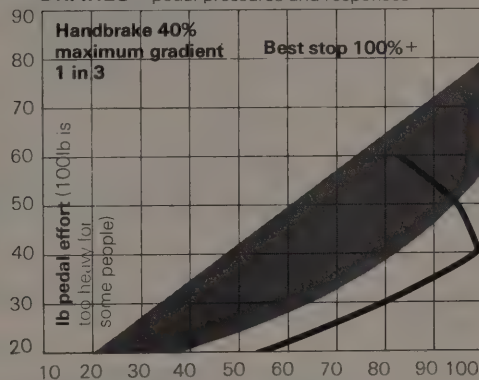


Ian Dawson

PERFORMANCE



BRAKES—pedal pressures and responses



% efficiency (ideal car's braking performance falls within central zone—above, too heavy, below, too light)

Fade test pedal pressure needed for 75% stop (ideal car would show no variation)

25lb at start; **25lb** in constant use; **37lb** in severe use

Watersplash 42lb at first, 2 stops to recover

FUEL 4-star/98 octane min overall consumption 29 $\frac{1}{2}$ mpg effective tank range 300 miles/10gal

Normal range of consumption

short journey, suburban	22 $\frac{1}{2}$ mpg
hard driving, heavy traffic	23 $\frac{1}{2}$ mpg
mixed roads—brisk, 50mph cruising	30 $\frac{1}{2}$ mpg
motorway—70mph cruising	30 $\frac{1}{2}$ mpg
quiet rural—40mph cruising	35 $\frac{1}{2}$ mpg

Consumption at steady speeds

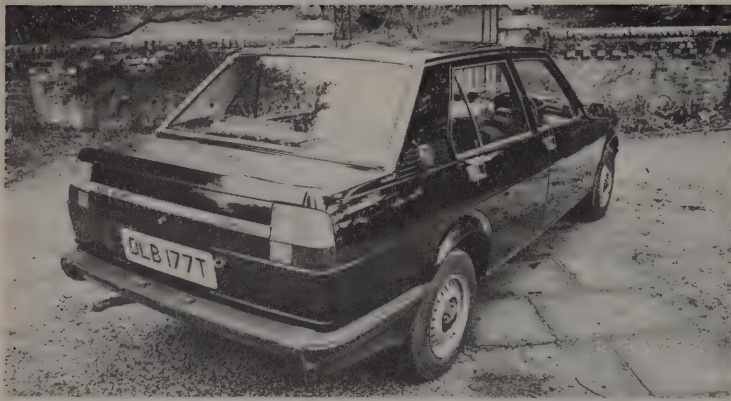
30mph	49 $\frac{1}{2}$ mpg
56mph	37 $\frac{1}{2}$ mpg
70mph	30 $\frac{1}{2}$ mpg
100mph	19 $\frac{1}{2}$ mpg

SAFETY CHECKS

steering: energy absorbing?	Yes	hazard warning: fitted?	Yes
front seats: secure mounts?	Yes	interior: well padded?	No
head restraint	Yes	w/screen: laminated?	Yes
front belts: effective convenient?	Yes	doors: crashproof?	Yes
rear belts: fitted?	No	childproof?	Yes
		petrol: spillproof?	Yes
		brakes: failsafe?	Yes
		load sensitive?	No

ON-ROAD PRICE (£)	CAPACITY (CC)	FUEL OVERALL (MPG)	MAXIMUM SPEED (MPH)	0-60MPH (SEC)	30-50MPH IN TOP (SEC)	BEST STOP (% g/lb)	OVERALL LENGTH (FT/IN)	MAXIMUM LEGROOM FRONT (IN)	TYPICAL LEGROOM REAR (IN)	STEERING TURNS/ CIRCLE (FT)
4895	1570	29 $\frac{1}{2}$	104	12.2	8.7 (4th)	100/40	13' 9"	41 $\frac{1}{2}$	37	3 $\frac{1}{2}$ /36 $\frac{1}{2}$
5757	1588	34 $\frac{1}{2}$	103	11.9	9.7	98/50	14' 6 $\frac{1}{2}$ "	41	40 $\frac{1}{2}$	3 $\frac{1}{2}$ /33 $\frac{1}{2}$
5311	1573	27 $\frac{1}{2}$	101	12.9	11.3	100/55	14' 3 $\frac{1}{2}$ "	40 $\frac{1}{2}$	38 $\frac{1}{2}$	4/31 $\frac{1}{2}$
5439	1995	26 $\frac{1}{2}$	107	11.2	10.0	97/30	14' 1"	41 $\frac{1}{2}$	41	3 $\frac{1}{2}$ /36 $\frac{1}{2}$
5502	1993	27 $\frac{1}{2}$	96	12.7	10.3	98/95	14' 2"	40 $\frac{1}{2}$	40	3 $\frac{1}{2}$ /34

4th—4th gear



and cushioned agitation sets in.

How strong

Failure to allow for the rust-breeding salt and humidity of a British winter has earned Alfa Romeo a lot of criticism in this country. Despite Alfa's protestations that all is now well and that current models are being built to last, our test car still left much to be desired. It was only one winter old—yet the underbody's pvc protection was already showing signs of its hit-and-miss application, and there was no evidence of the wax spray that was supposed to have been injected into box sections. Light rust was already apparent in places, the exhaust was flaking markedly, and a chip or two on the glossy black coachwork showed ominous signs that corrosion was only too willing to spread beneath the top coat.

Cleaning is easy, inside and out, with wheels that don't have too many nooks and crannies and carpets and cloth seats that brush well. No additional protection is applied to the outer door sills or bumper valances, and they can be tiresome to keep clean, let alone chip-free. Exposed weld seams and edges on the doors are covered with a plastic snap-on covering—better than nothing, but not as good as a proper enclosed weld. Alfa's standards of body construction still fail to match its sophisticated power-plant engineering.

How safe

The Giulietta stops every bit as well as it goes; in brake tests, it

felt as if the wheels were burrowing into the road. The brake-efficiency gauge shot right off the end of its scale, indicating that the all-disc system could comfortably exceed the theoretical maximum efficiency of 1g. This is as much a tribute to the car's weight distribution as to its brakes, enabling all four wheels to do their bit instead of skidding. The hand-brake's solo performance is good for the novice reason, and, although there were some signs of heat and water fade, neither caused real concern. Indeed, the brakes fade to the point where the servo's normally over-enthusiastic assistance becomes at last acceptable.

Cornering is extremely safe for both novice and expert alike. The steering effort required deters the timid from reckless speeds, yet its lightening feel can also warn the experienced that the front tyres are beginning to lose grip. The tail can be unglued from the road only by applying the power very brutally.

The Alfa's fully collapsible steering column, laminated windscreen and proper padding behind the sun visors are safety features that we always look for, but don't always find. The only serious shortcoming is an absence of reinforcement in front seatbacks (to protect harnessed front occupants from the impact of unrestrained rear passengers).

How much

Alfa's list price does include seatbelts, delivery and numberplates (though not a radio or road tax), and the 12-month warranty

includes two free services plus service parts up to 27,000 miles. It's a deal that keeps our calculated running costs (based as always on a 2½-year/30,000-mile ownership period) acceptably low; but thereafter parts become quite costly. Routine maintenance follows a 6/12,000-mile pattern.

Underbonnet accessibility is mixed: topping-up presents no problems, plugs and points are easily reached, but the fuel pump and starter motor look too buried and the carburettors and valve adjustments too complicated for all except the experts. The handbook offers reasonable help and most tuning settings—it's well translated, too.

Usually, the biggest item in car ownership is depreciation, and here the similar Alfetta (formerly available in 1.6litre form) has held its value reasonably well over the last two or three years. Insurance is rated at a similar Group 6.

The 29½mpg overall is disappointing, though—the rival Audi 80 notches-up 34mpg. Short journey work seems to depress the Alfa's average more than long, fast runs, on which 30mpg—or even better—is easy to achieve. The highish fifth gear must help motorway economy, but, even here, results are not spectacular—and the Giulietta will accept nothing less than good 4-star.

Verdict

The Giulietta took us by surprise but not by storm, for it's not as fast as its claimed power would suggest. We had expected a ferociously fast and rorty performer, and were prepared to tolerate some Latin temperament and discomfort as the price of the fun. What we got was a fun-to-drive Alfa that's a smoothie, too, thanks to its well-honed, balanced handling, even ride and magnificent rear seat accommodation. It's a blend to attract the family man who reluctantly traded his sports car for a mortgage.

The snag is, while this Alfa love affair starts sweetly with extended warranty terms, after two or three years owners may need rose- or rust-coloured glasses to help them keep seeing their Giulietta that way...



Each issue, DRIVE turns three private motorists loose on the cars under test to discover the man-in-the-road's opinion. For 50-year-old London building consultant Fred Pocock the Alfa was his last ride before leaving the Everyman panel—and the company of Claire Parker, 25-year-old housewife from Whitechurch, Hants, and Ron Daly, 32, an air-traffic controller at Heathrow Airport.

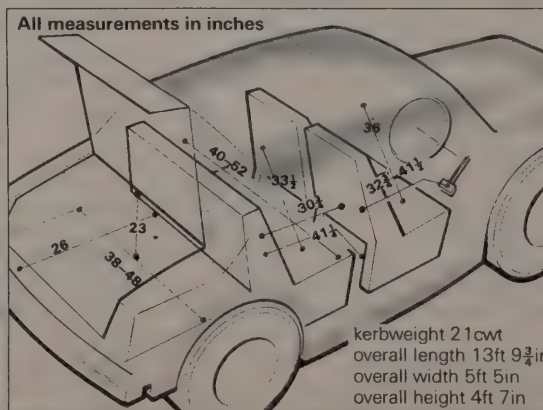
The Alfa Romeo Giulietta's advert boasts 'We've made you an Alfa you can't refuse'—but the majority of the panel replied, 'No way.'

'For £4800 I expect mechanical perfection,' said VW Golf owner Ron Daly, 'but the Alfa's gearbox is like stirring a box of nuts and bolts. The car handles well, and I couldn't detect under- or oversteer while cornering, but to me that neutral feeling's not pleasant. The general finish is ugly! I found plastic trim falling off the fascia, and rust on the bonnet and bumper. I couldn't rely on the body lasting three years of my kind of driving, so that rules the Alfa out for me.'

Ford Granada owner Fred Pocock agreed with Ron: 'The Alfa could accelerate extremely well in gear, but gear changes lost much of the speed I'd built up. If this box is the price of a better-balanced car then I'd rather have ordinary handling and a decent gear shift. The stiff clutch pedal's very tiring in town traffic, and the stalk switches badly need some markings. No, I don't want this car.'

Only Claire Parker, owner of a Renault 4, fell for the Alfa. 'I like a bit of vroom vroom,' said Claire. 'It makes driving fun—and the Alfa really is fun. It certainly sounded quick, and you can just flick the steering wheel for perfect cornering under power. Snags? Well, fifth gear shouldn't be positioned opposite reverse, and the way the speedo and tach needles swing in contrary directions is confusing. That's poor in a fast car.'

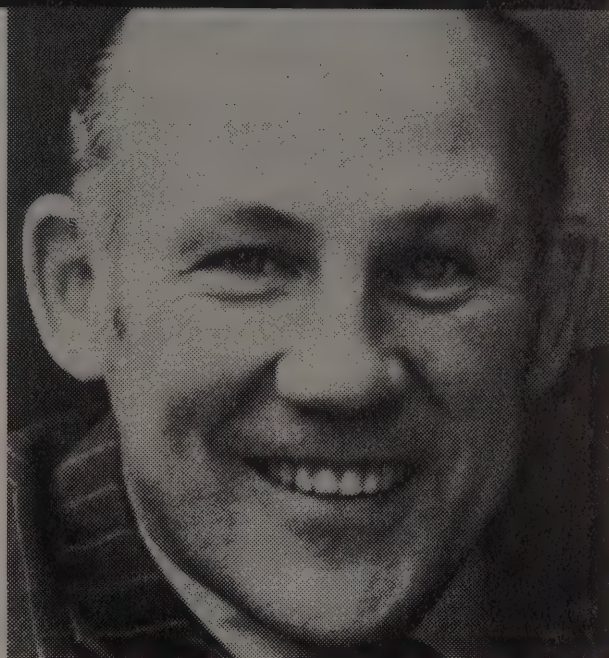
DRIVE professional car tester Peter Denayer comments: 'In fairness to Alfa, almost every five-speed gearbox has fifth opposite reverse, and car owners soon learn which switch is which. I must agree, though, that the poor gear shift quality can be a deterrent to enjoying this exciting car.'



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Tel.

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Mazda Montrose 2000GLS

Price £4684 On the road £4840

You have to admire Mazda: having had its fingers badly burned when it tried to burst in on the European car scene with Something Completely Different—the ill-fated Wankel rotary engine in the Mazda RX3—it began all over again on a much more modest basis. Enter a Euro-styled small hatchback, the Mazda 323.

Success was... well, modest. If the British market didn't exactly swallow-up 323s, at least it didn't spit them out.

Mazda now moves one rung higher on the car-buying ladder: its Montrose is a Ford Cortina-sized, middleweight family saloon with 1600cc and 2litre engine options, and, like its little 323 brother, it concentrates on Euro-car styling rather than mechanical innovation, with reliability and a few in-car novelties thrown in to tempt the showroom window-shopper—a ploy that has reaped rewards for other Japanese car makers.

DRIVE, too, was tempted. We walked in, and asked for a 10-day test drive in the big one.

How it goes

Apart from a loud 'clonk' as the engine rocked on its mountings, the Montrose displayed no signs of temperament as it was given the spark of life, starting first time every time. Surprisingly, Mazda sticks with a manual choke—one of the better ones—and the engine pulls so smoothly from the word go that it's no embarrassment in early-morning, bumper-to-bumper traffic.

Performance *feels* rather ordinary, but, when we put it against the stopwatch, the car proved to be one of the fastest in the 2litre class. Not in maximum speed—though 101mph is very respectable—but in acceleration both through the gears and in top gear.

Yes, you may say, that's changing gear at the maximum-permitted 6000 revs, with the engine howling. But in fact we found that, at the limit, the engine goes distinctly flat. The Montrose goes much quicker if gear changes are made at 5500rpm, clipping half a second off the 0-60mph time and more than a second off the 0-70mph burst, to give the figures quoted in our table. It does reduce the maximum speeds in the intermediate gears from 81, 61 and 35mph to the figures we show on the right, but there is a signal lesson for Montrose-owning economy drivers: change-up earlier, be kinder to the engine, save fuel... *and you will go faster.*

The clutch on our car was beginning to betray signs of its hard-testing life, but for the most part it was smooth and progressive and

still managed to drag the Montrose up a 1-in-3 incline—just. The five-speed gearbox is an absolute delight, with a nicely weighted spring-bias towards the third and fourth gears, and strong, precise synchromesh that ensures you always get the gear you want, even in the fastest of changes. The ratios are well chosen, and fifth is a truly long-legged over-drive gear.

Mazda, like many Japanese car makers, remains faithful to recirculating-ball steering. It's light, taking the strain out of low-speed manoeuvring, but there's little feel of the road through the wheel, and too much twirling to do round tight corners. There's also a sloppy, dead feeling around the straight-ahead position, making high-speed stability in crosswinds a somewhat anxious business and giving a very 'approximate' feel as you set up the car for a corner. No, the Montrose doesn't get many votes for inspiring handling.

On the other hand, Japanese cars have a clever knack of making you feel immediately at home behind the wheel, and the Montrose is no exception. The driver's seat is adjustable for tilt as well as rake, offers good location and even has adjustable lumbar support—something, however, with which we were never altogether happy.

Major and minor controls are, for the most part, well laid out

HOW GOOD

At-a-glance

DRIVE's verdict on the Mazda Montrose 2000GLS, taking into consideration its rivals, its price and what kind of car it's *meant* to be

Out of 10

PERFORMANCE

●●●●●●●●

FUEL ECONOMY

●●●●●●●●

HANDLING/STEERING

●●●

COMFORT/REFINEMENT

●●●●●●

INTERIOR/BOOT SPACE

●●●●●●●●

PASSENGER AIDS

●●●●●●●●

DRIVER AIDS

●●●●●●●●

ACCIDENT/INJURY SAFEGUARDS

●●●●●●

RUST RESISTANCE

●●●●●●

RELIABILITY/EASE OF REPAIR

●●●●●●●●

and work with pleasing precision. The righthand steering column stalk seems to take rather a lot on itself, working the washers, wipers, headlamp flash and main beam and indicators, but it's clearly marked and easy to get along with. The instrument pack and facia has a seen-it-all-before look, but it's none the worse for un-originality; all the information is there in clear view.

There's a large door mirror with (typically Japanese, this) electric remote control so that the driver can 'dial' a view; deep windows and screens ensure good visibility; the wipers leave few blind spots, although they lift off at high speeds; and there are powerful washers on the powerful headlamps.

How comfortable

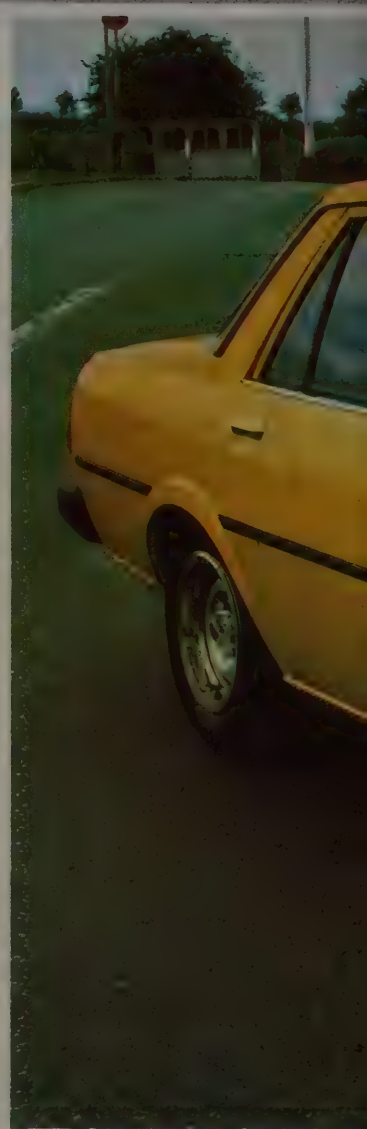
The Mazda's ride is a middle-of-the-road affair in more ways than one. There's not much cause for complaint over the cat's-eyes of reasonably well-dressed roads, apart from a mild case of Ford Cortina-type 'hip wriggle' as you pass over changes in surface or minor dips; but when the suspension is asked to do real work over major faults, things do become a little flouncy and troubled. For the most part, however, jarring jolts do not reach occupants.

Doors open wide, strong door-checks ensure that they *stay* open against wind or gradient, and there are courtesy-light switches on all four to help guide the way in at night. But the real surprise of the Montrose is reserved until you try to find your way *out* at night: leave the lights on after you've taken the key out of the ignition, and, as you open the driver's door, the air is filled with an ethereal, tinkling chime that had new drivers dancing around like ballerina dolls in a music-box!

On a less musical note, rear-footwell entry space could be better, and the more-elderly of our passengers found the low seat cushion a struggle when getting out. The back seat is well proportioned, however, and, with its built-in headrests, is a great place to snuggle back and relax. There would be room for a cosy threesome but for the bulky transmission tunnel. Knee- and legroom is average; headroom is generous.

There are lots of handy oddments spaces cleverly built-in to the Montrose, including a lockable, illuminated glovebox, but all tend to be on the small side. The good-sized, illuminated, fully-carpeted boot can be opened either by key or by an electric switch on the facia, but a high sill over which luggage has to be lifted, and a spare wheel that stows under the resultant pile, dampened our enthusiasm.

Mr Average Family-man, with



MAZDA MONTROSE 2000GLS

Front engine: 1970cc/4cyl, OHC (chain); one twin-venturi carb; 90bhp at 4800rpm
Rear drive: 5 gears; 20.9mph/1000rpm in fifth/18mph in fourth

Suspension: front—ind MacPherson struts, coil springs, anti roll bar; rear—live axle, trailing arms, Panhard rod
Steering: recirculating ball, 5 turns/31½ft circle; 5½J wheels, 185/70 SR13 radials

Brakes: servoed discs front/drums rear

Parts/repairs (inc VAT)
clutch £47.79 (fitting 2.1hr)
exhaust £67.04 (0.6hr)
headlamp unit £13.01 (0.3hr)
front bumper £71.36 (0.9hr)
laminated windscreen £49.90 (2.6hr)

oil filter and points £5.67 (0.5hr)
major service 6000 miles (2.5hr av)

	per year	per mile
Running costs	£890	7.14p
Loss of value	N/A	N/A
Total depreciation	N/A	N/A
Insurance group	provisional 6	

HOW IT COMPARES

Mazda Montrose 2000GLS

Colt Sigma 2000GLX

Ford Cortina 2000GL

Fiat 132 2litre

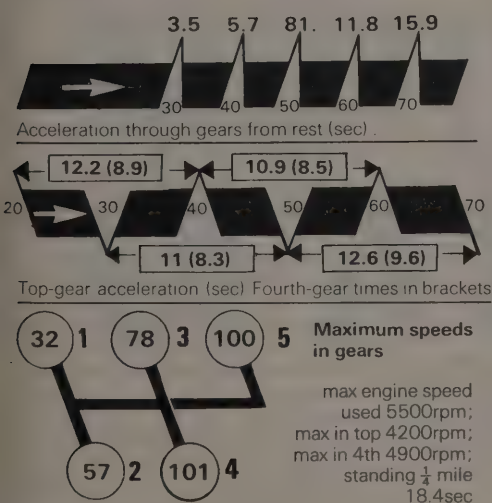
Renault 20TS (4-speed)

Cortina beater?

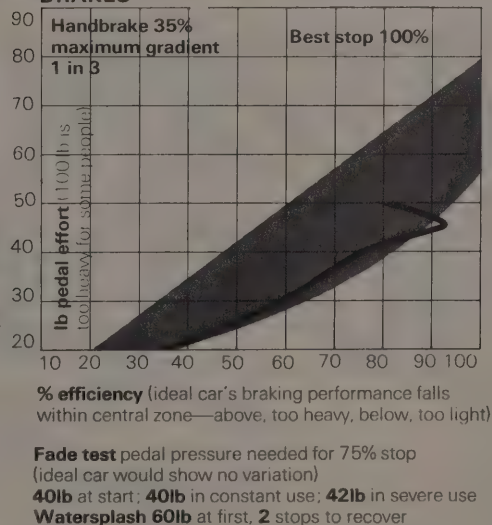


Ian Dawson

PERFORMANCE



BRAKES



FUEL 2-star/92 octane min overall consumption 29 $\frac{1}{2}$ mpg effective tank range 265 miles/9gal

Normal range of consumption

short journey, suburban	22mpg
hard driving, heavy traffic	25 $\frac{1}{2}$ mpg
mixed roads—brisk, 50mph cruising	29 $\frac{1}{2}$ mpg
motorway—70mph cruising	31 $\frac{1}{2}$ mpg
quiet rural—40mph cruising	35mpg

Consumption at steady speeds	4th	5th
30mph	48	52 $\frac{1}{2}$ mpg
56mph	35 $\frac{1}{2}$	37 $\frac{1}{2}$ mpg
70mph	28 $\frac{3}{4}$	31 $\frac{1}{2}$ mpg
max mph	15 $\frac{1}{2}$	16 $\frac{1}{2}$ mpg

SAFETY CHECKS 0 = factory fitted option

steering: energy absorbing?	No	hazard warning fitted?	Yes
front seats: secure mounts?	Yes	interior: wall padded?	No
head restraint?	Yes	w/screen: laminated?	Yes
front belts: effective?	No	doors: crashproof?	Yes
convenient?	Yes	childproof?	Yes
rear belts: fitted?	0	petrol: spillproof?	Yes
		brakes: failsafe?	Yes
		load sensitive	Yes

ON-ROAD PRICE (£)	CAPACITY (CC)	FUEL OVERALL (MPG)	MAXIMUM SPEED (MPH)	0-60MPH (SEC)	30-50MPH BEST (SEC)	BEST STOP (% g/lb)	OVERALL LENGTH (FT/IN)	MAXIMUM LEGROOM FRONT (IN)	TYPICAL LEGROOM REAR (IN)	STEERING TURNS/CIRCLE (FT)
840	1970	29 $\frac{1}{2}$	101	11.8	8.3 4th	93/45	14' 1"	40 $\frac{1}{2}$	39 $\frac{1}{2}$	5/31 $\frac{1}{2}$
149	1995	27 $\frac{1}{4}$	95	14.1	9.6 4th	100/100	14' 2"	40	38 $\frac{3}{4}$	4 $\frac{1}{2}$ /34 $\frac{3}{4}$
756	1993	27 $\frac{1}{4}$	96	12.7	10.3	98/95	14' 2"	41 $\frac{1}{2}$	38	3 $\frac{3}{4}$ /34
893	1995	29 $\frac{1}{4}$	105	10.7	9.2 4th	100/60	14' 5"	39 $\frac{3}{4}$	40	3/35 $\frac{1}{2}$
339	1995	29 $\frac{1}{2}$	104	12.8	10.1	98/50	14' 10"	42 $\frac{3}{4}$	40 $\frac{3}{4}$	3 $\frac{1}{2}$ /37 $\frac{1}{2}$

4th-4th gear

his 1.8 children, is nonetheless bound to appreciate a divided rear seat that can be folded down completely or left in 60-40% portions—a brilliant idea by Mazda that turns its seemingly-ordinary family saloon into a really practical and spacious load carrier.

The car is well equipped with creature comforts—there's a good-quality, five-pushbutton radio, and a prominent digital clock—and yet it can hardly be called lavish. There's no rear footwell heating, for instance, and very little warmth finds its way under the front seats to take the chill off those in the back. The heater is a water-valve type that takes time to respond to settings, but its clearly-marked controls and smooth-acting sliders help offset other deficiencies. Facia vents blow air at a lower temperature than the footwell outlets, and, with practice, it's possible to achieve a cool face/warm feet atmosphere for those in the front. As in many Japanese cars, there is also a recirculating facility to keep out other cars' exhaust fumes when you're stuck in traffic.

We were rather surprised to hear one or two facia and trim creaks over rough ground—not what we expect from a hardy Japanese—but body-boom periods are not a problem, with but a minor one at 50mph. Wind noise does tend to build up at high speeds, though.

The light, easy controls and flexible engine take the strain out of town driving, but parking is complicated by not being able to see the boot; and, as we say earlier, while the low-gear steering helps you ease into a space, it calls for a lot of wheel-twirling on corners.

How strong

Our engineers spend a lot of their lives under test cars, peering into their closed-box sections with endoscopes and removing door trims to look for rust, and they weren't all that impressed by the Montrose. Most of the important areas had no visible signs of any special treatment, and, where compound had been applied, it was patchy. Instead, Mazda concentrates its efforts on a process

called 'cathodic electro-painting', a system whereby paint is attached to the bodyshell by an electrical charge, forming, we're told, a coat so tough that the use of galvanised metals is unnecessary.

That's as may be, and only time will tell; but, until it does, our old-fashioned rust hounds are content with nothing less than a good coating of pvc over the entire underside, and compound-treated box sections. They were impressed, however, by plastic front-wheelarch liners and an absence of mudtraps.

The metallic paintwork on the test car was rather disappointing, with a pronounced 'orange peel' effect on most panels and a dull finish on the front wings.

Looking under the bonnet, it's easy to understand how the Japanese have earned such a good reputation: the attention to detail there is a joy to behold and an object lesson to all.

How safe

Although progressive, the Montrose's brakes were too light to please our testers—it was all too easy to get the front wheels locking up and skidding in an emergency (a classic case of too much servo assistance, which may impress on first acquaintance). Full marks, though, for their fade resistance, and for the hand-brake's performance. Watersplash recovery was also impressively quick.

Cornering on the limit, the car couldn't put a wheel wrong—no matter how hard we tried on the test track. Pressed into a bend, the nose runs wide, scrabbling off speed the faster you try to go; and when the throttle is released, it simply comes gently back into line. Uninspiring, maybe, but very safe.

Mazda has obviously gone to a lot of trouble to minimise the aftercrash risk from danger areas in the passenger compartment, but, like many cars, the Montrose falls down due to lack of safety padding around the windscreen. Drivers who sit well back will find, too, that the seatbelt buckle sits uncomfortably on the abdomen.

Rather than having flashing

lamps on the facia to warn that doors aren't closed correctly, the Montrose goes for a subtler approach: the courtesy-lamp switches are mounted at the rear of the doors, so the large interior lamp refuses to go out unless they are properly shut.

How much

Mazda has made it known that it intends to keep the Montrose price competitive with rivals such as the Ford Cortina and Vauxhall Cavalier, but DRIVE would be failing its readers if it didn't point out that both these cars—in 2litre, GL trim—are £300-£500 cheaper at the time of putting pen to paper. However, it's not a point we wish to labour: the well-equipped Montrose is extremely price-competitive.

Mazda dealers are a growing breed, but as yet they are still a wee bit thin on the ground. The 'works' of the Montrose are so straightforward, though, that we can't imagine many garages turning down the regular 6000-miles/six-months major-servicing contract.

Replacement-parts' costs and labour times are dearer than a Cortina's and typical of an imported car, but the 2½hr service needed every 6000 miles is more a reflection of Japanese conservative timing than product inadequacy.

At 29½mpg overall, the Montrose checks in at the top of the 2litre fuel-economy class, alongside the Renault 20TS and Fiat 132—and it does it all on 'cheap' 2-star fuel: that lazy over-drive fifth gear, worth an extra 2½mpg at 70mph, certainly helps.

Verdict

The Mazda Montrose is an extremely competent car. It won't excite boy-racers, but family motorists looking for practical transport, low running costs, the promise of superior reliability and a bit of luxury-car tinsel will... well, we were going to say *love* it, but it's difficult to fall head-over-heels about something that has the efficiency of a cooker or a fridge. It does its job, and that's it. But what more do most people ask?



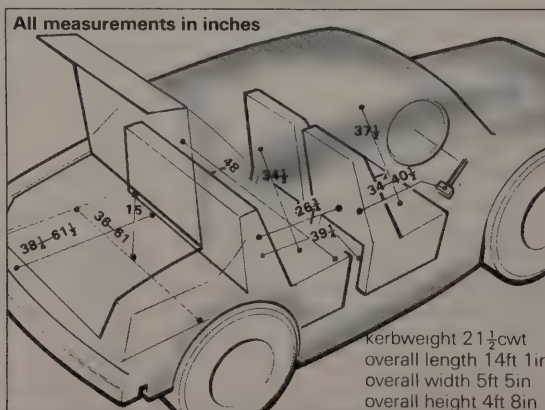
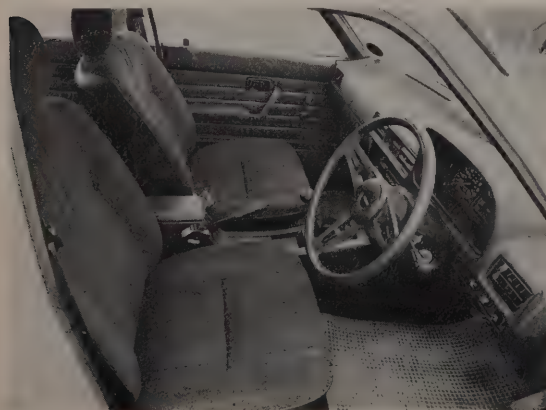
Everyman panellists Claire Parke and Ron Daly were joined by Graham Sparkes (left) for the rest of this issue's car testing. Graham teaches technical studies at a large comprehensive in Basingstoke, Hants, and some evenings he swaps chalk for a toolbox to teach car maintenance to adults. After seeing all manner of cars from all angles, inside and out, Graham's now a staunch fan of Saab. He runs a Saab 95 for its 'solid engineering and comfortable ride'—and its seven seats, which easily accommodate his wife, Mary, and their three young children.

While the men in our panel either loved or hated the Mazda, 25-year-old Claire Parker wasn't sure—for her husband had just bought the Montrose's arch rival. 'It felt as speedy as our new Ford Cortina 2000,' said Claire, 'but I'm confused by its ride. It felt odd—squirmy—and the steering felt vague. Then again, our GL doesn't have such an impressive list of extras, and the lumbar support was good for my long back. Difficult to choose between this and a Cortina GL; maybe if Mazda did an estate...'

Graham Sparkes solved Claire's confusion. 'The rear live-axle suspension is very unhappy, and it makes for poor directional stability. I had to keep correcting the steering even on the straight. It went more like a 1600cc, but it was an easy drive, too, with light pedals and a positive gear shift. I wouldn't want it, though. It's only following the trend—not setting it.'

Ron Daly, 32, found this Oriental perversely attractive: 'It's as if Mazda had dropped a plush new body on to old running gear. It's noisy, brash, but comfortable—and I liked it, as it reminded me of my old Sprite. I liked its solid feel, and when I braked into a corner the car's rear felt very keen to overtake me, sports-car style. I liked that, too. It's got driver appeal, and an attractive price-tag as well, so it should appeal to the trad sports car owner who needs a back seat.'

DRIVE professional car tester Peter Denayer comments: 'Ron Daly seems to like a challenge, but I confess that—like Graham—I was disappointed that the Montrose had nothing new to offer British drivers. Perhaps the Japanese say the same about the rival Ford Cortina.'



Any problems? Whether they are technical, insurance or legal, DRIVE's experts can help. Write to: Clinic, AA, Fanum House, Basingstoke, Hampshire RG21 2EA

Outlook: rain in places

There are two irritating areas of my windscreen that aren't cleared of rain, even though I've fitted two new sets of wiper blades. My garage says that the tension of the wiper arm is all right, and suggests that the cause may be deposits on the glass. However, I've tried a number of cleaning agents to remove them—washing-up liquid, window cleaner, white spirit, methylated spirit, even AA Screen Clean—and none has been successful. The problem makes me very uneasy about driving in the rain. Has Clinic any suggestions?—MISS H DIXON, LONDON W3
Frankly, you seem to have tried the things we would have suggested—in which case, it would seem that there could just possibly be a flaw in your windscreen, such as very shallow depressions in the glass that the wiper blades miss as they sweep across. If this is the case, the only remedy is drastic: have the screen replaced. Before

you take this step, however, contact Triplex, the screen manufacturer. We did, but it said that it needs to know more facts than we could provide—make of car, model and year, and the make of windscreen: it isn't necessarily a Triplex product. With more to go on, it may be able to offer advice.

Cut the crackle

My radio is plagued with annoying interference, probably from the alternator. I've tried fitting a suppressor similar to the one on my previous car's dynamo, but the crackle persists. Do I need a larger-capacity suppressor, and, if so, where do I fit it?—B HILLE, CARLISLE

It's almost certain that your old dynamo suppressor had an electrical value of 1MFD; your alternator may well need one of 3MFD (ie, three times more powerful). This should be connected between the main output (usually thickest) wire and the earth; but remember, the main output terminal of an alternator is always 'live', so disconnect the battery before working on it.

You don't mention the make of your alternator, but Lucas units have an internal suppressor. If this

is faulty, you'll need the help of an auto-electrician, with a special tool, to remove the end cover of the alternator.

Tax return

Can you tell me how much rebate I can expect when surrendering a road-fund licence, three months of which have expired?—M J CANNON, OXFORD

On an annual (£50) tax disc, the rebate is £37.50; on a four-monthly (£18.35) disc, the rebate is £4.16.

Return to sender

My Chrysler Avenger—an early model—had a fuel gauge that registered only intermittently, so I had my garage fit a new gauge. It worked all the time... but was unreliable. A second garage appeared to solve the problem, but, after a while, the gauge again became untrustworthy and finally failed.

Once or twice a year, usually on holiday (when the weather's hot?), the needle decides to tell a story for a while and then gives up again. Having spent £20, I'm reluctant to spend more money. What do you advise?—L GREEN, DORKING

Some early Avengers suffered from this problem, which was caused by a batch of faulty tank sender units.

The replacement fitted by the first garage (you don't say what the second garage did) could well be of early manufacture, too, and equally faulty.

To test the sender unit, disconnect the wire to the sender and touch it to earth. If the gauge needle moves fairly quickly to full when the ignition is switched on, you need a new sender unit. If it doesn't move, the fault lies in either the feed wire or the gauge.

Twist grip

How is Clinic on motorbikes? I've just bought an old 350cc BSA in really good condition—but it has one annoying habit: no matter how much I tighten the clutch- and brake-lever clamps on the handlebars, they keep slipping. I've tried padding out the clamps with insulating tape... but then there's not enough clearance for the clamps to fit the bars. Any ideas?—R N SOUTHEY, EDENBRIDGE

A couple of the older patrol staff who used to ride the AA's motorcycle combinations say that a neat trick is to smear the inside of the clamps with coarse valve-grinding paste before tightening them on to the handlebars. This gives enough bite to stop the clamps slipping without adding to their girth.

THE AA HELPS MOTORISTS OUT OF A LOT OF 'JAMS'.

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AA

Fiat Strada 75CL 5-door

Price £3989 On the road £4140



To say that the Strada has been long-awaited is to speak volumes—the market for a Fiat family-sized hatchback has been obvious since 1971, when the company practically invented the super-mini in the hatchback shape of its 127. But, while Volkswagen Golfs, Chrysler-cum-Talbot Horizons and Renault 14s lured away Fiat-minded fathers who just couldn't fit everyone into a super-mini, the Italians held their fire.

Finally, earlier this year, came the five-car volley—a mid-sized hatchback designed for the 1980s, built in 21st-century style by computers and robots, and called the Strada . . . or was it the Ritmo? While Fiat was still arguing about titles, DRIVE borrowed a pre-production sample. By the time we'd completed our 1000 test-miles, it had been decided to name the new 3–5-door range Ritmo in Europe and Strada in Britain. And we knew ourselves what to call it.

How it goes

The UK Strada is available with two engine options—1301cc and 1498cc, both of which are a development of Fiat's 1118cc power unit that first came on the scene in the late 1960s to power the 128. The larger version that DRIVE chose is also to be found in Fiat's little, rip-roaring X1/9 sports car, although, in the Strada's case, it breathes through a single-venturi carburettor.

After our recent early-morning experiences with an X1/9's auto-choke, we were pleased to find that the Strada has a good old-fashioned manual one. Starting was always prompt in the admittedly warm weather of our test; warm-up, bar one or two minor flutters, was trouble-free and we were able to dispense quickly with the smooth-acting choke.

The tachometer is red-lined at 3300rpm, and, to get the best acceleration times, one mustn't be reluctant to use all of these. Not that there's any real hardship, for the engine is super-sweet when the tacho-needle is tickling max revs. And acceleration times—well, the Strada muscled-in at the top of its class. Putting its power on the test-track tarmac very cleanly for a front-wheel drive, it notched up 0–60mph in 12.4sec, leaving the competition up to 4sec and more behind.

Currently, one can buy a Strada 75 only in CL trim, and the five-speed box is a standard part of the package. It's not the most positive of gear changes, but at least we didn't get tied up in knots the way we occasionally did with the X1/9's. The ratios are well chosen, giving a sensible maximum in each gear. The clutch is

a trifle on the heavy side, and has a long travel, but it managed a 1-in-3 hill without too much fuss.

The over-drive fifth gear pulls a lazy 20.4mph for every 1000rpm, but flooring the accelerator still produces a very respectable top-gear 30–50mph time of 12.8sec. Drop down into fourth, though, and this overtaking burst happens in an impressive 9.4sec; it will also take the Strada briskly up to the best maximum speed of just under 100mph.

If it were not for the very high standards that Fiat itself has set, we would probably be reasonably happy about the Strada's steering and handling, putting it down as slightly above average. But the enthusiast who is thinking about replacing his Fiat 128 is almost certain to be disappointed in the way that the Strada has watered down the steering's almost-telepathic feel of the road. There's more weight to the mechanism, too.

Cornering isn't as flat, either, although the first leanings are halted—almost *too* suddenly—before they develop into moderate body roll. That said, we are sure that red-blooded types will still enjoy the Strada's vice-free handling, even if it doesn't stir their adrenalin in the way that Fiat's small family saloons have in the past and that Alfasud counterparts still do.

Speaking of the Alfasud, it would be nice if the Strada had a similar rake adjustment for the steering

HOW GOOD

At-a-glance

DRIVE's verdict on the Fiat Strada 75CL, taking into consideration its rivals, its price and what kind of car it's meant to be

Out of 10

PERFORMANCE

●●●●●●●●

FUEL ECONOMY

●●●●●●●●

HANDLING/STEERING

●●●●●●

COMFORT/REFINEMENT

●●●●●●

INTERIOR/BOOT SPACE

●●●●●●

PASSENGER AIDS

●●●●●●

DRIVER AIDS

●●●●●●

ACCIDENT/INJURY SAFEGUARDS

●●●●●●●●

RUST RESISTANCE

●●●●●●

RELIABILITY/EASE OF REPAIR

●●●●●●

column: we are sure that would overcome our objections to the typically Italian, long-armed/short-legged driving position, particularly as the seat's range of adjustments are so good. The generously proportioned seat locates the driver well, but our testers complained of back-ache after a long day at the wheel.

Minor controls follow Fiat's usual pattern of three column stalks—a good, uncomplicated system into which newcomers quickly tune, thanks to the clear markings and easy reach. A row of five twin-barrel switches, grouped vertically down the outer edge of the instrument panel, take care of the minor controls. Again, these are clearly marked, but, no matter what your height or seating position, some are almost certain to be masked from view by the large steering wheel.

Instruments are all clearly visible behind a single sheet of non-reflecting glass. The two main dials—a poorly calibrated speedo (with trip recorder) and a tachometer—are separated by fuel and coolant-temperature gauges. On either side of this pack is an impressive array of 10 warning lamps, plus two blanks. In Fiat-style, though, some are a little too bright for night driving.

How comfortable

No matter how hard manufacturers strive to improve suspension systems, there is one thing of which you can be sure: somewhere along the development road, they have to strike a compromise between ride and handling. Now, DRIVE testers—split personalities every one—can sympathise with this conflict, and, while our enthusiast-selves are disappointed that the Strada doesn't handle as crisply as the 128, our family-man halves admit that the new car's softer, more-compliant ride is more in tune with domestic responsibilities. Around town, one could accuse the Strada of being a trifle knobbly, but never crude or jarring, and, as speeds increase, it levels out very acceptably.

One or two minor trim creaks apart, there's a well-put-together feel about the car. General noise levels are low, particularly wind noise, which has long been a problem for Fiat. Transmission whine is audible at low speed, but it's nothing to get worked up about; and though the engine note is loud at high revs, it's an efficient, enthusiastic sound that doesn't grate. At the other end of the scale, idling is sewing-machine smooth.

Getting in and out of the Strada is helped by good footwell space and doors that open wide, but we do wish Fiat would improve those flimsy check-links that are next to no good at holding the doors open



FIAT STRADA 75CL 5-DOOR

Front engine: 1498cc/4cyl, OHC (chain); 1 Weber single-venturi carb; 75bhp at 5800rpm

Front drive: 5 gears; 20.4mph/1000rpm in top (16.9mph/1000rpm in 4th)

Suspension: front—ind MacPherson struts coil springs, anti roll bar; rear—ind MacPherson struts, transverse leaf spring

Steering: rack and pinion, 3½ turns/34t circle; 4½J wheels, 165/70SR 13 radials Brakes: servoed discs front/drums rear

Parts/repairs (inc VAT)

clutch £43.42 (3.7hr)

exhaust £56.03 (0.9hr)

headlamp unit £12.17 (0.2hr)

front bumper £62.08 (0.65hr)

laminated windscreen £73.96 (0.8hr)

oil filter and points £5.18 (0.5hr)

major service 12,000 miles (2.3hr av)

per year per mile

Running costs £773.47 6.44p

Loss of value £465 4.04p

Total depreciation £1630 13.58p

Insurance group 4 (provisional)

HOW IT COMPARES

Fiat Strada 75CL 5-door

Austin Allegro 1500 estate

Talbot Sunbeam 1.6 GL

VW Golf GLS 1460

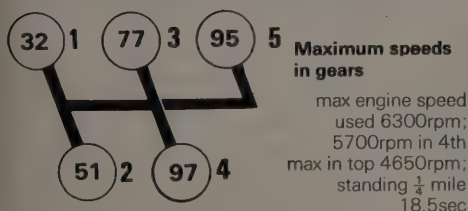
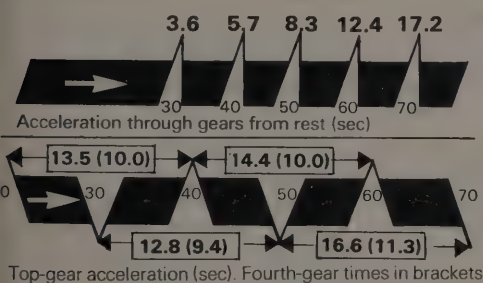
Volvo 343 DL manual

Auto Strada

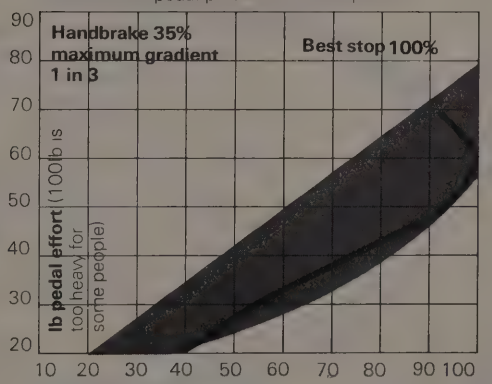


Ian Dawson

PERFORMANCE



BRAKES — pedal pressures and responses



Fade test pedal pressure needed for 75% stop (ideal car would show no variation)
40lb at start; **35lb** in constant use; **40lb** in severe use
Watersplash immediate recovery

FUEL 4-star/97 octane min overall consumption 36mpg effective tank range 360 miles/10gal

Normal range of consumption

hard driving, heavy traffic	31mpg
short journey, suburban	31mpg
motorway—70mph cruising	34½mpg
mixed roads—brisk, 50mph cruising	36mpg
quiet rural—40mph cruising	42½mpg

Consumption at steady speeds	4th	5th
30mph	53mpg	55mpg
56mph	39½mpg	43½mpg
70mph	31½mpg	34½mpg
max mph	20½mpg	22½mpg

SAFETY CHECKS

steering: energy absorbing?	No	hazard warning: fitted?	Yes
front seats: secure mounts?	Yes	interior: well padded?	No
head restraint?	Yes	w/screen: laminated?	Yes
front belts: effective?	Yes	doors: crashproof?	Yes
convenient?	Yes	childproof?	Yes
rear belts: fitted?	Yes	petrol: spillproof?	No
		brakes: failsafe?	Yes
		load sensitive?	No

ON-ROAD PRICE (£)	CAPACITY (CC)	FUEL OVERALL (MPG)	MAXIMUM SPEED (MPH)	0-60MPH (SEC)	30-50MPH IN TOP (SEC)	BEST STOP (% g/lb)	OVERALL LENGTH (FT/IN)	MAXIMUM LEGROOM FRONT (IN)	TYPICAL LEGROOM REAR (IN)	STEERING TURNS/ CIRCLE (FT)
4140	1498	36	97	12.4	9.4 (4th)	100/60	12' 11"	39½	38½	3½/34
4118	1485	34½	92	16.2	11.5 (4th)	87/50	12' 11½"	40	39½	3½/34½
3743	1600	33½	95	13.9	10.6	98/60	12' 7"	40	35½	3½/30½
—	1457	34½	96	12.8	10.9	100/50	12' 2½"	39"	37½	3½/32½
4115	1397	32½	88	16.4	12.8	100/70	13' 9"	41½	40	4½/29½

4th—fourth gear

on a hill or in any sort of a wind. Rear knee- and leg-room is good, even with the front seats set right back, and there's space for a cosy threesome. We liked the backrest angle, but the flat cushion had us wriggling uncomfortably after a few miles.

The tailgate opens wide on twin gas struts, with elastic straps (we wouldn't give much for their life expectancy) lifting the rear parcels shelf/canopy as it rises. Boot space is reasonable, but not over-generous. Increasing the load height is easy—just remove the canopy. Now find somewhere to put it—that's the difficult bit: it's one of those that doesn't fold down or lie flat on the boot floor.

Drivers who are more interested in carrying luggage than people can fold down the rear seat's back; in the case of the 75CL, only half need be folded down, making this version extremely versatile and practical. First, you have to grapple between the backrest and cushion to find a plastic loop, and give it a fair old tug to pull the cushion forward. A word of warning: there were spiteful sharp edges, hidden out of sight on our car, that drew blood. The trigger that releases the backrest is much safer and more convenient.

Oddments space inside the car is large in number but mean in size, so much so that it's difficult to find somewhere to put the handbook. Still, creature comforts set a high standard—tinted glass, stereo radio, rear screen pillar lamps, complemented by a fully trimmed interior.

Heating provisions are compromised by some rather strange controls. Instead of the usual slide, there is a dial-a-temperature control that, in our car, was so stiff that it was effectively impossible to achieve the desired setting. And the distribution control was similarly afflicted, making it difficult to direct the warmth. Things quickly became stuffy, and the fresh-air provisions proved disappointingly inadequate.

How strong

Italian cars have the reputation of living happy if short lives, with the main reason for their premature

demise being rust. Fiat, obviously conscious of this, has been busy in recent years trying to stop the rot with special primer dips, pvc sealant, front wheelarch liners and wax-injected box sections. Usually, it makes a pretty good job of it, too, apart from box-section waxing that's sometimes hit but more often miss.

Wise old men of the industry say that, unless a car is properly designed and put together, you ain't gonna stop the rot for long, no matter how much time and effort you spend on protection. Well, Fiat has decided it's all to do with the human factor, so it has largely done away with humans and replaced them with a team of robots called Robogate. Is this the answer to the dreaded Friday car? Only time will tell.

Those large plastic bumpers that tend to swamp the front and rear ends may not look particularly elegant, but they should protect the car against minor nudges. It's a pity that Fiat chose to finish them in grey, though, for they are almost impossible to keep clean.

How safe

Brake-pedal travel is rather long and spongy—a little disconcerting for the new Strada driver, but it makes no difference to the good, even response all the way up to the excellent 100%+ best-stop at a sensible 60lb pedal pressure. It seems Fiat has at last learned that the best servo-assisted systems don't stand cars on their noses at featherweight pedal loads. In really arduous use, we were able to induce fade, but recovery was prompt.

Cornering stability on the limit is impressive, too. The nose of the car runs progressively wide on fast corners, with the tyres scrubbing off excess speed, and it returns to a tighter line immediately and undramatically when the driver backs off the accelerator.

Injury-prevention features include inertia-reel seatbelts front and rear and a laminated windscreen—good in this market sector. Interior padding impressed, too, only failing to get a 'yes' in our safety checks because of a

lack of padding on the windscreen pillars.

How much

Like most manufacturers, Fiat takes fuel consumption very seriously nowadays. Besides improving overall engine efficiency, it is also going in for higher gearing and that five-speed gearbox. It's not all sales chat, either—it really works: our 36mpg overall is extremely impressive. We doubt if many drivers will ever get below 30mpg.

Parts prices, though higher than British counterparts', are reasonable by European-car standards. The warranty is for 12 months, unlimited mileage, with a further 12 months/24,000 miles on most major components. There's also two-year cover against bodywork corrosion, and first-year membership of a certain motoring organisation...

Considering the Strada's specification and high level of standard equipment—probably the best in its class—it is very competitively priced. Insurance seems destined to fall into Group 4, which is about average, and the highish depreciation figures have been worked out on a Fiat 128 because the Strada is so new.

Verdict

DRIVE is reluctant to comment on a car's styling, unless, of course, it hampers efficiency in some way: beauty, after all, is in the eye of the beholder. We must admit, however, that one tester was moved to ask how on earth he could be expected to drive round in something looking like that... although, after 1000 miles, he said it really didn't look too bad after all.

The Strada is a fine car in many respects. Not so exciting as its forerunner 128, it's nonetheless a better all-rounder and a class leader in performance, economy and equipment—not bad for any car.

If Fiat's robots successfully overcome the Italian problem of rust and reliability, even our beauty-minded tester might seriously consider putting his own money on it. Perhaps beauty is in the *wallet* of the beholder...



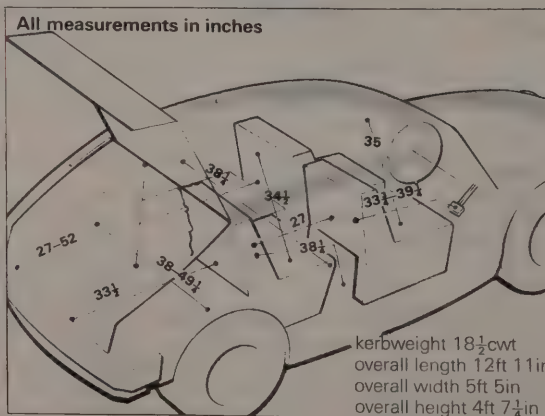
The Everyman panel had all seen what must rate as the best car advertisement ever on British TV, and were looking forward to the car 'built by robots'.

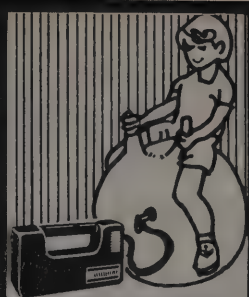
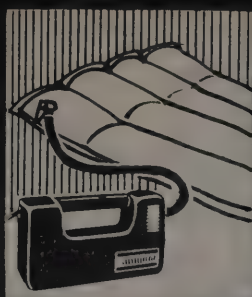
'I don't like the shape,' said housewife Claire Parker, 'but I have to admit the car's bigger inside than out—it has masses of luggage space. I didn't get on with the five-speed gearbox very well—I got fifth when I wanted third. The brakes and roadholding were good, though I didn't feel that the car liked to be driven hard, and it was an effort for me—the handling felt twitchy. The door locks are odd, too, their green/red colour-coding works the wrong way round. I thought I was going to love the Strada, but it isn't *that* nice.'

'I don't like the shape, either,' said technical studies teacher Graham Sparkes. 'It's obviously aerodynamic, but I don't like the plastic bits front and back. It was reasonable to drive, though I expected it to be quicker. You could get it going, but it was noisy, with a high-pitched whine that I couldn't trace. I didn't like the gear change—it was a bit like a Maxi's, and that's terrible. I found the ride rather rough, too. It was continually bumping and vibrating, and on the motorway it was very noisy—certainly noisier than it should have been. Under the bonnet, everything was very well set out, and I wouldn't have to pay a garage to look after it for me.'

Air-traffic controller Ron Daly plans to sell his VW Golf, and the Italian car is a potential replacement. 'Unfortunately, I don't think the Strada has the driver appeal of my Golf. It felt twitchy on straight roads, but going round corners was no problem. It didn't feel as safe as my Golf, and the steering was too heavy. I had troubles with the dials—the rev counter and speedometer are too similar—and the fascia is horrible, too plasticky. When I opened the door the catch fell off in my hand. The Strada's comfortable, but it doesn't have a Golf's sparkling performance—and that's important to me. Would I buy it? I'll have to stay uncommitted until I've tried the Renault 14 and Volvo 343.'

DRIVE car tester Peter Denayer comments: 'Test figures indicate that the Strada can be as quick as a Golf GLS 1460, and, once you're used to its initial dive into corners, it is very stable, too.'





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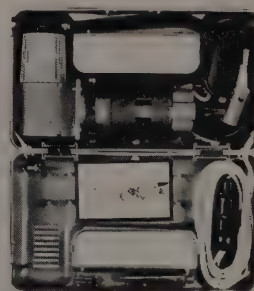
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IT HIT car sales in Britain with the force of a hurricane. Born of petrol shortages, increasing prices at the pumps and the prospect of higher wages, the 'wind of change' whistled through the market-place in the first two months of this summer, leaving dazed and gasping motorists and car dealers in its wake.

Yet it all began so differently: as a strong June trade wind, in fact, that was to break every record in sight. New-car sales positively leapt—up by 51% on June 1978, and 29% better than the previous all-time June high of 1972. But then the storm broke, and, as one by one the blows came, sales of new cars in July (always a bad time, with the new registration suffix just around the corner) plummeted. The month's figures were the lowest of any July for at least 10 years.

In August, traditionally the best month of the year, there was still turbulence: new-car sales were down almost 14% on August 1978. Nonetheless, with motorists learning to live with the higher cost of petrol, there were signs that things were beginning to stabilise...

But the truth is that the upheaval affecting new models has been nothing compared to what has happened on the used-car scene, where sales outstrip those of new cars by an estimated 4½ to 1. Life there is by no means back to normal. And a nationwide straw-poll carried out by DRIVE among secondhand-car dealers and agents suggests that it will be some time yet before this market recovers.

The used-car sector is not buoyed by company-fleet purchases, which account for 65% of all new-car registrations. It is on its own, and currently struggling to stay afloat because of lack of demand for cars over 2litres, and a continuing shortage of good secondhand models coming on to the market.

Both are hangovers from the bombshells of mid-year. Bigger-engined cars are suddenly unpopular; and since the petrol crisis, private owners of small cars are holding on to them for longer. The result is that the number of high-mileage, ex-fleet vehicles on the used-car market has increased out of proportion, and sought-after, low-mileage economy models are rare.

The problem is magnified because of the Save It quest for economical performance which, in the case of some models, is causing demand to outpace supply by 3 to 1. Among other things, this is triggering...

Panic buying. Motorists are falling over themselves to trade-in 2litre-plus models for smaller cars. Even owners of middle-of-the-road family saloons are changing to the next size down.

Cost parity. Big, luxury models that—new—cost at least twice as much as family saloons are being offered for the same price as small cars, simply because it's the only way that traders can move them. For the same reason, even brand-new big cars are sometimes being sent to auction.

CAR SALES

GOING GOING GONE

Long queues With inevitable delivery delays, as manufacturers fight a losing battle to keep up with orders for economy models, many potential new-car customers are trying to avoid the wait by buying secondhand instead.

Even greater pressure The ranks of new-car buyers 'going secondhand' are being swelled further because of the widening price-gap between new and used models.

Worse, as the DRIVE study shows, amid the panic-buying, caution is being thrown to the wind. Says Martin Rigney, managing director of the Sheffield branch of Promotacar, a sort of used-car estate agency: 'We've had people phoning up offering cash for 1972 Minis, and firming-up a sale without even looking at them.'

In fact, the Mini *isn't* the car attracting most secondhand buyers. That distinction belongs to the 1.3 and 1.1 variants of the Ford Escort—as the waiting-list at the London-based Computacar sales organisation amply demonstrates. At the last count, the 290 Escorts on its files were being chased by 1000 clients.

Two-thirds of 30 used-car outlets quizzed by DRIVE in a round-Britain poll declare that the Escort is the car most in demand. All give the same reason: it spells economy without sacrificing room—the 'ideal compromise', as some dealers put it.

But *is* it? Certainly, according to calculations based on the latest DRIVE Index of Motoring Costs, motorists are kidding themselves if they believe that it is especially cheap to run. As the table shows (see page 34), on the evidence of owners' experiences in the 12 months ending June 1979, the Escort 1.1 has running costs that are among the highest in the 'popular'-car bracket. The 1.3 version doesn't fare too well, either: it's more than half as expensive again to run as a Vauxhall Chevette.

According to some dealers, today's *real* secondhand bargains are to be found among the big, luxury cars. Mike Richardson, managing director of British Car Auctions, says: 'Small models are holding their values, but executive-type cars are going for well under list-price.' To prove his point, he quotes recent BCA sales of a 1977 Ford Fiesta, 1977 Renault 30TS and 1977 Citroen CX2400

Pallas. The Fiesta (normal secondhand retail price, £1950) was knocked down for £1750; the Renault and the Citroen (which before the fuel crisis would have sold for more than £4000) went for £2000 and £2250, respectively.

'This is typical of what's happening at the moment,' Richardson goes on. 'In addition, a 1976 Peugeot 604 has gone for more than £2000 under list, and a 1977 Daimler Sovereign £3500 under.'

Dealers also report a staggering drop in big-car prices in the new-vehicle sector. Malcolm Bohm, who owns Blackford Bridge Used Car Show, at Bury, Lancs, says that recently he was offered a Ford Granada Ghia 2.8 estate for £1000 under normal retail. And even brand-new 1.6 Ford Cortinas, he says, are being put through auctions... and, complete with full, 12-month warranties, are going for £300 below list-price.

This is a surprise, because before the crisis new Cortinas were being sold at auctions for *above* list-price because of demand and delivery delays. Says Bohm: 'The turnabout can only be the result of dealers feeling the pinch, and doing anything to stimulate cash-flow.'

BCA's Mike Richardson firmly believes that motorists who take advantage of the good current prices of big cars will find that the models will appreciate in value next year: 'Once the public accepts the price of petrol, luxury cars will again begin to move, and their asking-price will increase accordingly. In my view, the buyers of that Peugeot 604 and Daimler Sovereign will be quids in.'

Both models are in fact among the 10 *least* in demand at the moment in the used-car market. Pinpointed by the DRIVE survey, these are: 1 Jaguar, 2 Ford Granada and Mercedes-Benz, 4



Renault 30, Peugeot 604 and Rover 3.5, 3 Daimler Sovereign, 5 Lancias, and Citroen CX, 6 BMWs.

Isn't there a danger that advice to 'buy big' is just panicky sales talk from the trade? Well, perhaps not if the experience of the 1973 fuel crisis is any guide. Then, too, there was little difference in price, on the used-car market, between small family cars and executive models. But six months later, when things returned to 'normal', motorists who had bought bigger cars found that they had depreciated far less, if at all, than medium and small models. And the amount that the other cars had depreciated came to far more than the difference in cost of the extra petrol consumed.

'Depreciation is the biggest single loss-factor,' confirms Mark Smith, of Mark Smith Autosales, Nottingham. 'Petrol, even at today's prices, is a fleabite in comparison.'

However, if you are tempted to go against the trend and search-out a luxury car—don't leave it too long. Prices are rising slowly, and the chances are that already you'll have to shop around and be prepared to haggle...

Another unusual effect of the crisis this

time around is that the 'old banger' market has, if anything, declined. 'We've not done anywhere near the same amount of business in cheap oldies since petrol went up,' says Mike Richardson. 'The whole game has gone crazy. A 1974 Cortina in a banger sale recently went for nearly the same price as a 1976 Cortina in the regular auction next door on the same day. I can only think that buyers are worried about the possibility of saddling themselves with excessive unmanageable repair costs.'

The majority of dealers surveyed appear to confirm this. The most common prices being paid for used cars, they report, are £1000-£1500, and £1500-£2000; and 3 to 5-year-old cars are in greatest demand.

But because of the difficulty of getting hold of the cars that are in most demand, and at the right price, many dealers have fallen on hard times. A typical lament comes from GW Motors, of Teddington, Middx: 'The money people are asking for cars is now so high that profit margins

are becoming harder to maintain. The majority aren't even prepared to sell. Motorists are becoming increasingly aware of what smaller cars are worth, and just how much it could cost them to change. Their attitude seems to be: "Better the devil you know, than the devil you don't."

Says Brian Lawrence, owner of Brian Lawrence Motors, south-west London: 'It's a vicious circle. With main dealers selling fewer new cars, it follows that there are fewer trade-ins about. The sluggishness is being experienced all down the line.'

Just how sluggish things are can be assessed by the report of Jones Bros, of Chipping Sodbury, Avon. Sales manager



Anthony Harrison says: 'We had a summer sale in which we took £100 off everything. Since then, we've removed the "sale" signs but maintained the reductions, yet still we're finding it tough to attract buyers.

'We are keeping prices at pre-VAT increase levels. We daren't charge more, and I shouldn't think that anyone else in the trade can.'

Some dealers, like Malcolm Bohm, are finding things so difficult that they are considering closing down. Says Bohm: 'What with the rise in VAT and the almost-impossible prospect of finding stock that will sell, I've been forced to put my company up for sale. In my 15 years, I've never known things to be so bad.'

If many others follow suit, the Office of Fair Trading may look forward to working overtime. Says Richardson: 'I can see a lot of dealers moving out of their showrooms to private addresses, and masquerading as members of the public when selling cars. The law demands that traders give their registration number in newspaper adverts when carrying out business from home. But it's probable that many will ignore this formality in the belief that they'll sell more cars if the public thinks that it's dealing privately.'

So... what of the future? Though most secondhand-car dealers feel that the current fuel crisis is no worse than any of the past, they are very worried about the prospect of a winter of

industrial strife, with its threat of forcing down spending, and of further petrol-price increases. October's income tax cuts will be largely nullified by the VAT increase, they believe, so the only ray of hope, slender as it seems, is that the Chan-

cellor will not carry out his threat of extra taxation on company cars. The advantage of this would be an uninterrupted supply of ex-fleet cars coming on to the used market, and the chance that more people

continued on page 64

See how they run...

This table, based on the latest DRIVE Index of Motoring Costs, shows how much cars up to 10 years old cost (per month) to run in the year ended June 1979.

Mileage bandings are calculated on typical monthly distances driven by owners surveyed.

Running costs include petrol, oil, servicing and repairs, insurance, road-fund licence, and motoring organisation subscription. They do not take into account accessories expenditure nor depreciation.

Where appropriate, the first figure in parenthesis after each model denotes the car's current placing in terms of sales based on figures and estimates from 30 used-car firms around Gt Britain. The second figure in parentheses shows placings in terms of demand.

400-600 miles per month

BL Mini 850 (3) (3)	6.8	5.5
BL Mini 1000 (3) (3)	8.1	6.3
BL 1100/1300	8.3	6.6
VW Beetle (9) (11)	8.6	6.9
Fiat 500/127 (9) (11)	9.0	7.1
Chrysler Imp	8.7	7.1
Simca 1000/1100	10.3	8.1
BL 1800/2200	11.4	8.8

600-750 miles per month

Datsun Cherry (8) (9)	5.8	5.1
Fiat 128/124	5.9	5.3
VW Golf (6) (6)/Polo (-) (10)	6.3	5.8
Datsun Sunny (7) (8)	6.7	6.0
Triumph Dolomite/Toledo	6.7	6.1
Vauxhall Viva (9) (11)	7.8	6.8
Chrysler Avenger (-) (11)	8.8	7.7
Ford Escort 1.1 (2) (2)	9.1	8.0
BL Maxi 1500/1750 (7) (9)	9.6	8.5

750-1000 miles per month

Vauxhall Chevette (5) (6)	5.2	4.6
BL Allegro (7) (8)	5.6	5.0
Ford Cortina 1300	6.4	5.6
BL Marina 1300 (7) (9)	6.7	5.8
Ford Capri 1600 (6) (7)	7.4	6.5
Chrysler Hunter 1500/1750	8.2	6.9
Ford Escort 1.3 (1) (1)	8.2	7.0
Triumph 2000pi	8.4	7.3
BL Marina 1800	8.7	7.4
Rover 2000/3500 (9) (-)	8.7	7.5

1000-1200 miles per month

Vauxhall Cavalier 1.6 (5) (7)	5.8	5.4
Ford Cortina 2000	6.1	5.7
BL Princess (9) (11)	6.4	6.0
Ford Cortina 1600 (4) (4)	6.7	6.1
Ford Granada (9) (-)/Consul	7.0	6.5

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400 600 miles

Pence per mile: 750 miles

Pence per mile: 1000 miles

Pence per mile: 1200 miles

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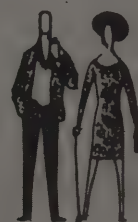
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Insurance Services

LOOK UNDER the bonnet of a Citroen CX, and you may well be tempted to think the firm's motto is: 'Why be difficult when, with a little more effort, you can be impossible.'

The question for secondhand buyers is: do CX-owners neglect the works for fear of a garage bill that resembles their phone number? It was a thought that interested Computacar, too—the London-based used-car-directory service. With its help, we set out to pick a winner for two Citroen CX prospectors...

Joe Roberts, a 34-year-old designer from Birmingham, had decided that a CX would give him, as he put it, 'superior motoring'. Joe had been running an Audi 80L for the last four years and had nothing but praise for it. But, with 60,000 miles on its clock, he decided that he wanted something different, with perhaps more of a 'touch of gracious living'.

Glyn Evans is a 29-year-old, Hendon-based company director who knows all about cars that are different—he owns an AMC Pacer, first UK-registered in 1975... and you won't find that hunk of American heavy metal in our used-car price guide. His wife runs a reliable Renault 16TS, and he thought that, by sticking with the French, he would find similar virtues in a Citroen CX.

The Search in the Midlands

Joe soon found out that CXs were as hard to find as they were to sell. A company executive whom Joe met on his rounds told him that his firm had been trying, without success, to off-load a director's CX2000—a 1977, R-registered model that had been on offer at £3000. The local Citroen dealer would offer only £1200; would Joe be interested in buying it for £1650... with the exhaust blown?

A bargain? Well, it certainly *looked* cheap, but could there be greener grass round the corner? Joe decided to play the field and set off to see a CX2400—a 1976, P-registered car with 48,000 miles clocked up, being offered privately for £1500.

This one had the luxury touch of electric windows, but it didn't have the 2000's power steering. 'It would have killed me driving that car for long in town traffic,' Joe moaned. 'The bodywork was poor, too, with rust spots all over the place.' He decided to go back to square one, but this time with DRIVE along for the ride. So how about a CX for £1650...?

Second Opinion

Yes, the exhaust pipe had gone, agreed AA engineer Bernard Tasker. 'The whole system needs replacement... and it could be an expensive business.'

Tasker pressed on. An odd noise from the engine area was tracked down to the water-pump belt's jockey pulley that had seized completely, causing the belt to become *very warm indeed*. With this in mind, he was reluctant to run the engine for long, but, apart from very noisy valve gear, the engine seemed sound.

On the road, severe clutch slip didn't help, and the squeal from the rear brakes

told Tasker that one at least was devoid of friction material—this was metal rubbing on metal. Less serious was a steering pull to the right, probably curable by a simple wheel-alignment adjustment.

'At the asking price of £1000 below "book" retail,' admitted Tasker, 'it does have its attractions, but Mr Roberts might need a fair proportion of his "saving" to right the wrongs. And that timing chain noise could get worse...'

Tasker and Roberts decided to keep looking, and a search of local-press classified advertisements turned up a 1976, 2200 Super on the forecourt of a Citroen agent, with a price-tag of £2795—more than Roberts could really afford. The garage did offer to knock off £95, but only if there was no part-exchange.

Roberts was not impressed: 'Apart from having 45,000 on the clock and no power steering, the bodywork and interior were in shocking condition.'

Second Opinion

Parts of the car had indeed been repainted, and not all its damage had been repaired, either. The overall appearance was



described by Tasker as 'poor', while the bonnet was 'very poor'.

Mechanically, conceded Tasker, the car wasn't *too* bad, but a badly worn nearside front tyre suggested an alignment problem, as was confirmed by a pull to the left during the road test. Slight play in the steering rack would undoubtedly have meant a new rack in the not-too-distant future—not a cheap item. Performance was poor, and there was a misfire.

Joe went back for his director's car at the bargain price. But it's one thing to content yourself with the thought of saving cash; it's another to lay it all out for garage bills.

His first bill came to £170 plus VAT to replace the exhaust, service the car and replace the brake shoes. Joe couldn't afford a clutch replacement—that would be another £100—or the new tyre. Such 'non-essential' repairs would have to wait.

The Search in the South

Glyn Evans set his sights rather higher than Joe, earmarking £5000–£6000 for his new car and enrolling the help of Computacar to find him a CX Prestige. He discovered, however, that buying was only half of his problem: he was offered what the trade calls 'funny money' for his Pacer.

With AA engineer Laurie Pirie alongside, first stop was an Austin Morris dealership in north Surrey, where a 22,000-mile, S-registered Prestige was on offer at £5995. Said Glyn: 'The salesman—who turned

out to be the sales manager—was indifferent, to put it mildly, and could hardly bring himself to answer our questions.'

'When I asked about warranty, he eventually grunted in monosyllables that I would get a year on "certain parts"'. If there was no part-exchange, he would replace the worn tyres and send the car to a Citroen dealer for a service. He wouldn't touch the body defects.'

Second Opinion

Although the bodywork looked good, patches on both nearside wings had been resprayed and the nearside front wing had been dented—about £70-worth of repairs needed, and the metallic paint would be hard to match. The windscreen was starting to crack at the bottom righthand corner; being both tinted and laminated, this would be a very expensive replacement indeed.

The interior was smart, but the pocket on a rear door had been almost torn off by passengers using it as a door pull, seat-trim studs were loose, and the gear-lever gaiter was hanging off. The bonnet-release arm was no longer fastened to the pivot.

The salesman took our twosomes for a test run—despite an illegal tyre—and Pirie got out thinking that new disc pads would be needed soon, and that valve noise indicated a need for tappet adjustment.

Pirie's verdict? Tyres, brakes and water leaks needed instant attention; body damage and cracked windscreen counted, too. But, drop the price a little, do these repairs and, with the year's warranty, the vehicle could be *fairly* attractive.

A second CX Prestige was tracked down in central London—a black company car with 13,500 miles to its credit. This 1978 model was priced at £5500 and the sellers promised to put right any faults our inspector found—on the face of it, a generous offer.

Glyn thought that this car looked tatterier than the first, but it was £500 cheaper. That's £500-worth of problem-solving.

Second Opinion

Underbonnet, things were grim—and grimy. The coolant level was dangerously low, with a leak where the top hose joined the block; the alternator was loose and vibrated when the engine ran; engine oil was dirty, and the tappets were noisy; and bearings in the cooling fan were making expensive noises.

Engine harshness was diagnosed as worn crankshaft bearings. If the big-end bearings were on the way out, then an owner would need an understanding bank manager. More likely, thought Pirie, the harshness could be from over-advanced ignition timing.

A typical company car, said Pirie—rather neglected and in need of attention. It carried the scars of a central London run-about, but the price meant it could well be a worthwhile buy.

There was now just *one big problem*: Britain didn't seem to want a Pacer at any price. But Glyn had heard that Continental buyers were keener. He decided to book a ferry... **ROBERT OXFORD**



Are Citroens big lemons?

SECONDHAND REVIEW SPOT CHECKS: CITROEN CX SERIES

Bodywork There are no areas of CX bodies that are especially prone to rust, thanks to the usually sound protection of the standard Tectyl treatment. Paintwork at the base of doors and front valances should be checked for stone-chipping, however, and the stainless-steel trim can start corrosion where it meets the body. Like all metallic-paint finishes, the CX's is difficult to match; of course, this also means that a secondhand buyer can usually identify accident damage by signs of a local respray. Look into headlamps: condensation can damage lenses, and replacements are expensive. Watch out for a 'milky' windscreen—a sign of moisture in the lamination. On rare occasions, water seeps in through the roof-mounted aerial: check headlining for stains.

Engine A well-developed, robust unit; make general checks for abnormal noises and oil leaks, but valve gear is usually trouble-free. A puddle of oil on the gearbox could mean a leaking camshaft oil seal; ultimately, this can lead to clutch slip and judder. No special weak areas on the exhaust

system, so simply check through-out for deterioration and faulty mountings. All drive belts should be closely examined for faults. Ensure that the electric cooling fan works by seeing if it switches on after a short period of idling on a hot engine. Check radiator coolant level, and see that there are no seepages from either of the radiator end channels.

Transmission Camshaft oil seal leak (see Engine section) can cause clutch slip and judder, and, if the clutch has to be replaced, it is an expensive job. 'Normal' slip can be adjusted out, however. Drive-shaft wear is rare, but check for unusual knocks on drive and overrun, and also when turning on full locks. A sloppy change can mean wear in the rod-linkage ball joints, but an adjuster on the gearbox remedies this. Coast in neutral (*don't switch off the ignition*) and listen for wheel-bearing noise.

Suspension The CX's complex hydropneumatic suspension causes raised eyebrows among reliability-conscious motorists, but, in fact, it is a remarkably troublefree system: Citroen

insists that it has had very few warranty claims. Test the system by selecting the high-suspension setting (lever forward) with the engine running; stand outside and watch the car rise—it should take about 2min to reach jacking height, to the accompaniment of weird whirs and clicks; if the car slowly sinks, a valve is faulty. Check suspension pipes and joints, so far as possible, for seepages—LHM fluid should be changed every 30,000 miles: like brake fluid, it ages.

Tyres The CX's costly tyres have a life of about 30,000 miles, but this can be considerably reduced by enthusiastic cornering or heavy-handedness with the steering.

Brakes Check that the front-pad-wear warning lamp does not come on. Even so, it is important to check the thickness of the pads (expect about 15,000 miles per set), and examine discs for score marks. Brake hard: if the nose of the car dips without levelling promptly, the brakes could be partially seized. The handbrake should operate fully by five clicks of the ratchet. If not, it could mean adjustment—or new pads.

Vauxhall Royale

Price £9711 On the road £9891

Vauxhall showrooms today are crowded with new Chevettes, Cavaliers, Carltons and Royales, when, only five years ago, they displayed just two basic models—the Viva and Victor. The secret of Vauxhall's revival can be read under the bonnet of its fleet's new flagship, the Royale. Below the engine plate's large legend 'Vauxhall Motors Limited, England' is the discreet admission that it's all made by Herr Adam Opel in W Germany. The Royale is almost totally an Opel Senator.

Confused? Well, Vauxhall's badge was welded on Opel's efforts by General Motors, the American car giant, when it realised that marrying the talents of its two European subsidiaries was the quickest way to breed a new family of 'British' cars. Equally usefully, the promotion of the Senator to Royale gives Vauxhall its first up-market prestige saloon (and coupé) for many years.

'Vauxhall can now stop apologising,' its marketing director reportedly announced at the Royale's launch, last autumn. It was even rumoured—and promptly denied—that dealers would vet the socio-economic standing of potential Royalists to preserve the 'limo' image. It couldn't have been true, for Vauxhall has graciously loaned our humble car testers a Royale saloon for a 1000-mile taste of how the other half drive...

How it goes

In the Royale's engine room sits a large, 2.8litre straight six with an unusual cam-in-head design (not to be confused with an overhead camshaft) that works short pushrods and rockers. It breathes through one enormous twin-venturi carburettor to produce a respectable 140bhp. The origins of this power unit are pure Opel, but, determined not to be out-ranked by the Royale, the outwardly similar Senator boasts fuel injection, electronic ignition and 200 extra cc's, all boosting its power to a right royal 180bhp.

Whether the engine is cold or warm, patience is required as the starter churns for a lengthy period before firing the Royale into life. The auto-choke's a gentleman, however, showing no signs of temperament in chilly mornings or stop-start traffic.

There didn't seem to be much punch in the acceleration until the tachometer was swinging around its mid-range—a subjective impression reinforced by the test car's stiff accelerator action. In reality, sinking the pedal hard into the plush carpet makes the Royale cut a dash that equals, if

not better, most rivals. A standing-start sprint to 60mph took just 11sec, and the engine pulled smoothly and lustily up to a highly respectable maximum speed of 116mph.

Automatic transmission is standard, though for those who prefer to do-it-themselves, a four-speed manual box is available as a no-cost/no-refund option. The three-speed General Motors transmission is usually one of DRIVE's favourites, being sensitive, smooth and prompt in action. We were disappointed, therefore, to catch the test car's box dithering about some of its decisions at low speeds, which made progress unregally jerky at times (symptomatic of incorrect factory adjustments). Even so, the harder we worked the box the better it behaved. Experiment proved that there was nothing to be gained from overriding the auto-change points in an attempt to better its performance, and we were impressed by the smoothness of the changes when the T-shaped shift lever was pulled from D into 2 at high engine speeds. It was possible, however, to be too hasty about the opposite procedure, when the engine sometimes screamed in neutral as the shift lever slipped freely from D to N.

We particularly liked the Royale's power steering, which doesn't make the usual mistake of feeling too light. Unfortunately,

little feel of the road is conveyed through the mechanism, but enthusiastic drivers benefit from seat-of-the-pants feedback that gives confidence when exploiting the Royale's well-balanced and good-natured cornering ability. The Continental 70-Series radial-ply tyres give superb grip, even in the wet, and we had to try very hard indeed to power the car's tail out of line. Bumps met in mid-corner do not deflect the Royale off course, and high-speed directional stability on a windswept motorway is of a high standard.

The Royale has an impressive range of adjustments to help drivers get comfortable behind the wheel; in addition to the usual ones, there's also a seat height adjustment and a steering column tilt. The seat is firmly in the German tradition, though not so unyielding as in some foreigners, and generously proportioned, in keeping with the stature of those that the Royale is courting. The pedals' pads are a decent size, but the brake is a little too far to the right for those who use left foot braking when driving an auto—and there's no footrest for those who don't.

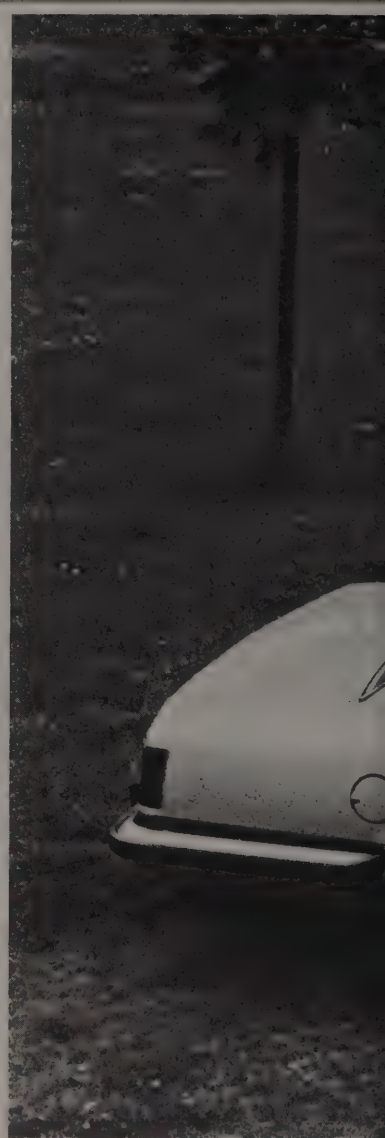
Royale instrument styling looks no more up-market than the humble Cavalier's, though everything is there, with battery, coolant, oil and fuel gauges clearly positioned either side of a large speedometer (unhelpfully numbered for UK speed limits) and tachometer, which are separated by a bank of six warning lamps.

Lighting control is divided between a constantly illuminated rotary switch and a stalk that operates dip, main-beam and flash; this stiff stalk ambitiously controls the indicators, windscreen washer and wipers, too. When the powerful halogen headlamps are working they automatically get washed when the screen washers are used.

How comfortable

Passengers enjoy fully independent suspension that delivers a reasonably level and absorbent ride—most of the time. The trouble is that the suspension lacks the versatility, especially when the going gets rough, that buyers will expect of this class of car. Firm springing can give an unchivalrous jolt that then sets the bonnet a-bobbing because of the soft dampers' inability to catch the rebound as quickly as they should.

In other respects, the Royale's progress is impressive. The discreet engine raises its voice above a murmur only when worked hard, and on the motorway it remains smooth and quiet. A stiff accelerator and the occasional transmission hiccup mar town trips somewhat, but good, deep



VAUXHALL ROYALE

Front engine: 2784cc/6cyl, OHV (chain); one Solex twin-venturi carb; 140bhp at 5200rpm
Rear drive: 3-speed auto; 20.9mph/1000rpm
Suspension: front—ind MacPherson struts, coil springs and anti-roll bar; rear—ind semi-trailing arms, coil springs, anti-roll bar
Steering: power-assisted recirculating ball, 4 turns/32ft circle; 6J alloy wheels, 195/70HR 14 radials
Brakes: servoed discs all round

Parts/repairs (inc VAT)
auto box (exch) £658.59 (fitting 2.2hr)
exhaust £190.78 (1.4hr)
headlamp unit £45.71 (0.6hr)
front bumper £30.07 (0.9hr)
laminated windscreen £116.92 (2.1hr)

oil filter and points £6.93 (0.8hr)
major service 12,000 miles (2.8hr av)

	per year	per mile
Running costs	£1242.55	10.35p
Loss of value	N/A	N/A
Total depreciation	N/A	N/A
Insurance group	6	

HOW IT COMPARES

Vauxhall Royale
Ford Granada 2800i Ghia auto
Mercedes-Benz 280E
Rover 2600 auto
Audi Avant GL5E auto

HOW GOOD

At-a-glance

DRIVE's verdict on the Vauxhall Royale, taking into consideration its rivals, its price and what kind of car it's *meant* to be

Out of 10

PERFORMANCE

●●●●●●

FUEL ECONOMY

●●●●●

HANDLING/STEERING

●●●●●●●●

COMFORT/REFINEMENT

●●●●●●

INTERIOR/BOOT SPACE

●●●●●●

PASSENGER AIDS

●●●●●●●●

DRIVER AIDS

●●●●●●●●

ACCIDENT/INJURY SAFEGUARDS

●●●●●●●●

RUST RESISTANCE

●●●●●

RELIABILITY/EASE OF REPAIR

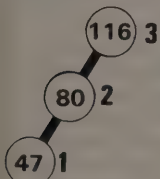
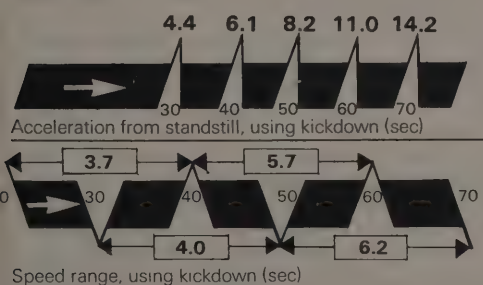
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Nouveau riche



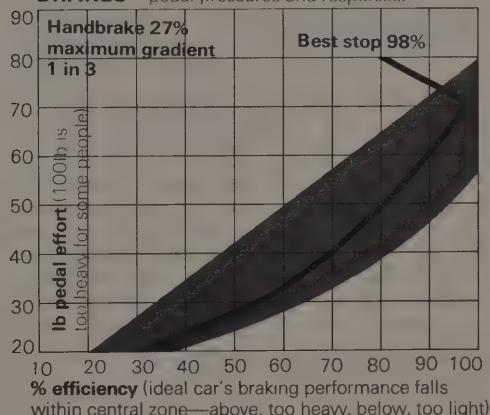
Ian Dawson

PERFORMANCE



max engine speed used 5600rpm;
max in top 5650rpm;
standing ¼ mile
18.1sec

BRAKES—pedal pressures and responses



Fade test pedal pressure needed for 75% stop (ideal car would show no variation)
42lb at start; **42lb** in constant use; **70lb** in severe use
Watersplash 62lb at first; **3** stops to recover

FUEL 4-star/98 octane min overall consumption 21½mpg effective tank range 285 miles/13½gal

Normal range of consumption

hard driving, heavy traffic	17½mpg
short journey, suburban	17½mpg
mixed roads—brisk, 50mph cruising	21½mpg
motorway—70mph cruising	24½mpg
quiet rural—40mph cruising	25mpg

Consumption at steady speeds

30mph	35½mpg
56mph	28mpg
70mph	24½mpg
max mph	15mpg

SAFETY CHECKS

steering: energy absorbing?	Yes	hazard warning: fitted?	Yes
front seats: secure mounts?	Yes	interior: well padded?	No
head restraint?	Yes	w/screen: laminated?	Yes
front belts: effective?	Yes	doors: crashproof?	Yes
convenient?	Yes	childproof?	Yes
rear belts: fitted?	No	petrol: spillproof?	No
		brakes: failsafe?	Yes
		load sensitive?	Yes

ON-ROAD PRICE (£)	CAPACITY (CC)	FUEL OVERALL (MPG)	MAXIMUM SPEED (MPH)	0-60MPH (SEC)	30-50MPH IN TOP (SEC)	BEST STOP (% g/lb)	OVERALL LENGTH (FT/IN)	MAXIMUM LEGROOM FRONT (IN)	TYPICAL LEGROOM REAR (IN)	STEERING TURNS/ CIRCLE (FT)
9891	2784	21½	116	11.0	4.0	98/70	16' 0"	41	42	4/32
9755	2792	22½	113	11.1	6.3	92/50	15' 6½"	41	41	3½/35
12507	2746	21	120	9.4	4.0	97/45	15' 6"	45	42	3½/36
7775	2597	24½	109	12.6	4.5	100/70	15' 5"	41½	41½	2½/33½
8201	2144	22½	110	11.7	4.4	96/55	15' 4½"	41½	40½	3½/34½

glass areas and the power steering help take the strain out of parking.

A turn of the driver's door key unlocks the four doors and the boot. All passenger doors are linked to good interior lighting, open wide and stay put against a brisk wind. The rear footwells' space may restrict access for the less agile; but otherwise rear accommodation is generously proportioned. There's a large fold-down centre armrest to complement the door rests, and only the awkward, unremovable head restraints prevent passengers snuggling back into the nicely angled backrest.

The Royale's fanfare of publicity reaches a crescendo on the high level of equipment, which includes a three-speaker stereo radio/cassette player, electric windows, remote-control boot opening and tinted glass all round. Such opulence was offset for DRIVE by churlish comments about the heavy blue-tinted sun strip across the top of the windscreen, and the prominence of imitation wood and blanked-off rocker switches.

Air conditioning is the only extra-cost option publicised—despite the handbook's reference to optional front foglamps. Our car was fitted with the standard heating system, with an easily regulated air blender plus separate output for rear passengers. Comprehensive demisting equipment should ensure mist-free driving in bad weather conditions, and good fresh-air provisions are backed-up by a steel sliding roof that's controlled by an annoyingly low-g geared manual winder.

Oddments space, particularly that convenient for the driver, is restricted to a lockable, illuminated glovebox, large bins on the front doors, and transmission tunnel trays. The boot is reasonably large and can be opened (if the ignition's on) by a pushbutton switch that lurks unlabelled by the driver's right knee.

How strong

Our test Royale fell down DRIVE's social ladder when we discovered that it lacked the scrupulously applied, thick coat of bituminous

underbody sealant worn by cheaper Vauxhalls such as the Chevette. The body-beautiful preparation stages are claimed to be more comprehensive than on Vauxhalls of old, but the outer defence against rust consists of unconvincingly applied pvc under the wheelarches and a heavy wax spray that could be removed by just one hard winter. There are potentially rust-breeding mud-traps under the wheelarches, and inside the box sections we found rust on some seams.

Apart from a blotchy boot lid, the test-car's metallic paintwork was impressively finished, and large wrap-round bumpers with rubber inserts and broad rubbing strips should ensure that it stays that way.

Stylish wheels and radiator grille apart, washing the exterior is easy. Inside, the crushed velour upholstery gathered mounds of hair from one tester's long-haired dog, but they were easily removed by a vacuum cleaner.

Under the Vauxhall's sleek skin there's nothing particularly new in Opel's engineering, so the prospects for reliability look good.

How safe

Ignoring the initial trace of free pedal movement, the brakes work well in everyday use. Their creditable best stop of 98% falls within the desired area on our brake graph, and progression up to this point is true and even. Only severe use induced some brake fade and, even then, recovery was prompt. It took three prods of the pedal to restore full efficiency after the all-disc system had suffered a soaking, but again the system's response was useful all the time.

While the steering is not as informative as we would like about the state of the front wheels' grip, the Royale's stability while cornering is so forgiving to the careless driver that only the foolhardy are likely to find themselves sliding sideways.

Should the crunch be unavoidable, drivers can rely on a good list of secondary safety features. A little more interior padding at head level and the fuel tank's relocation away from the rear of

the car would meet our only complaints.

How much

Ultimately, value judgements of the Royale must depend on who holds the purse strings—you or your company. A comparable BMW or Mercedes—and any Jaguar—would cost more, but virtually every other rival from the top of the big manufacturers' ranges is cheaper to buy. We're not forgetting the Opel Senator—all its goodies in the engine compartment inflate the Royale's price-tag by a further £1600...

It's difficult to be specific about depreciation trends as the Royale is such a new venture for Vauxhall, but it has been rumoured that dealers have been asked to keep trade-in prices attractive.

Minor servicing falls due every 6000 miles, with the big one coming round every 12,000 miles. It's all straightforward work, though we doubt if many Royale owners will trouble to lift the large, heavy bonnet with its crude prop-up stay other than to check routine maintenance items.

Fuel consumption is approximately what traditional big-six buyers will expect, though the new Rovers and the Peugeot/Renault/Volvo trio, with their co-op V6, all do better.

Verdict

Thanks to the transfusion of new, blue blood from the German branch of the family, Vauxhall has at last a limo to shine in the carparks at head office and the Round Table's venue. Image apart, the Royale's also immensely enjoyable to drive—far more so than the rival Ford Granada 2800i Ghia—and not everyone may notice that the ride and back seat accommodation lacks the comfort of a Peugeot 604TI. It's also well equipped, if not as luxuriously trimmed as many alternative—and cheaper—buys.

The Royale, then, is an impressive pretender to the title of executive express, so maybe it's only a reflection of our testers' socio-economic standing that it would take a Vauxhall price cut or freeze to win their loyalties away from the Royale's cheaper contenders.



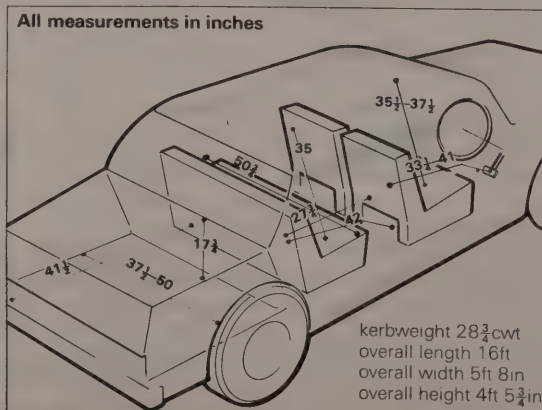
Vauxhall's Royale commanded some respect but no loyalty from our panel of amateur test drivers...

'The advertisements led me to expect a lot,' said air-traffic controller Ron Daly, 'so the Royale had to do a lot to convince me. In D it was deceptively quick, but it took me a long time to find the kickdown point. It needed an awful lot of pedal pressure to achieve it, and the auto box seemed to change back up too soon afterwards. I also found it easy to overshoot 2 from 1 and go straight into D, which is embarrassing when you're overtaking. The driver's seat adjustments are all I could wish for, and there's bags of room inside, but I won't buy one 'til I'm 60—or need to impress business rivals.'

'It was certainly fast in D,' said housewife Claire Parker, 'but why are the gear-shift's markings so stupidly hidden on the far side of the stick? I couldn't see which setting I was in. For such a big car it was easy to drive through town, and its lack of noise certainly lives up to the maker's claims. I defy anybody not to be comfortable in this car. It's stylish, beautifully finished, and I'd prefer it to the rival Ford Granada—though if I had that much money I wouldn't buy a big Vauxhall. I'd go for a BMW.'

'I had the same trouble as Ron,' said technical studies teacher Graham Sparkes. 'There are no proper click-stops for the gear shift, so I kept slipping from 1 straight into D by mistake. The accelerator's tiresome, too; the pedal's back-pressure often forced my foot up out of kickdown at the wrong moment. Full lock is very good for manoeuvring, and you can hear the power assistance—which says something for the car's overall quietness. I also noticed rust weeping from the welds at the back. The manually adjusted door mirror is mean when even the Mazda Montrose has a remote-control one. No, I'd rather spend a little extra to get something more distinctive than a Vauxhall Royale-cum-Opel Senator.'

DRIVE car tester Peter Denayer comments: 'The Royale's posh ads had led the men in the panel to expect the ultimate saloon, and, although Claire liked the car, she'd prefer its big-name rival. When will Vauxhall's unfortunate past lie down and die—as it now should?'





WHAT'S NEW

Smashing news

AWARE that windscreen breakages can be costly and time-wasting, the Windshields Group now offers **free credit** for fitting of new windscreens throughout the UK and in those parts of Europe covered by the company's Rout-o-Glas services.

On joining the scheme, the motorist is provided with a credit card containing a Free-phone number that will connect him with Windshields' all-day every-day mobile screen-replacement service. After on-the-spot repairs have been carried out, the card holder has up to 30 days to pay.

Recently introduced to the British market by Macpro Ltd, of Frankton, Warwickshire, Computecruise 44 is a Swiss-made 'onboard navigational electronic computer'. It offers no less than 26 different functions, including a cruise control that will establish and maintain a pre-selected road speed, and will resume this speed after the system has been overridden by the brake pedal or control button.

It's all cleverly computed by a 3in-by-6in module that contains a backlit keyboard with a vivid-blue five-digit display. All the information is shown in metric units, but these can be converted instantly to Imperial measures at the push of a button.

The functions available are: time of day; elapsed time; elapsed-time display freeze; time to fuel exhaustion; distance to fuel exhaustion; time of arrival at current speed; wake-up or reminder alarm; stopwatch/lap timer; distance travelled since fill-up; distance travelled on trip; distance to arrival; fuel used since fill-up; fuel used on trip; fuel left in tank; fuel required for arrival at current consumption; current speed; average speed; current fuel consumption on trip; current fuel efficiency; engage cruise control at selected speed; battery voltage, inside and outside temperature.

At the moment, UK and European **exhaust-emission regulations** are not as stringent as those in the USA and Japan, but they are to be tightened, first in 1980 and again in 1982.

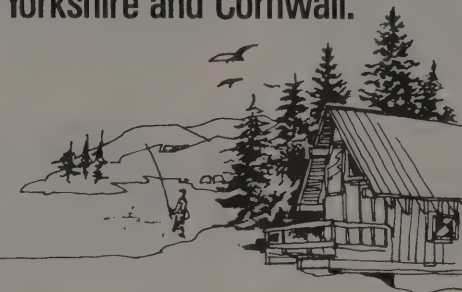
In order to satisfy government Type Approval exhaust gas-test requirements for new vehicles, Vauxhall started in July to commission a computer-controlled diagnosis system to analyse exhaust gases. The new laboratories in which it is housed, built at the company's 700-acre Millbrook proving ground, in Bedfordshire, will, when completed later this year, be the most sophisticated of their kind in the UK, and possibly the most advanced in the world.

An interesting aspect of the test equipment is that it will be able to analyse data from two separate vehicles in any permutation of three:

- with both vehicles simultaneously undergoing the same test
- with the two vehicles simultaneously undergoing different tests
- with the two vehicles being put through the same test, but starting at different times.

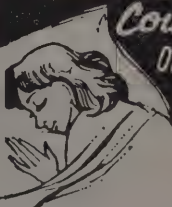
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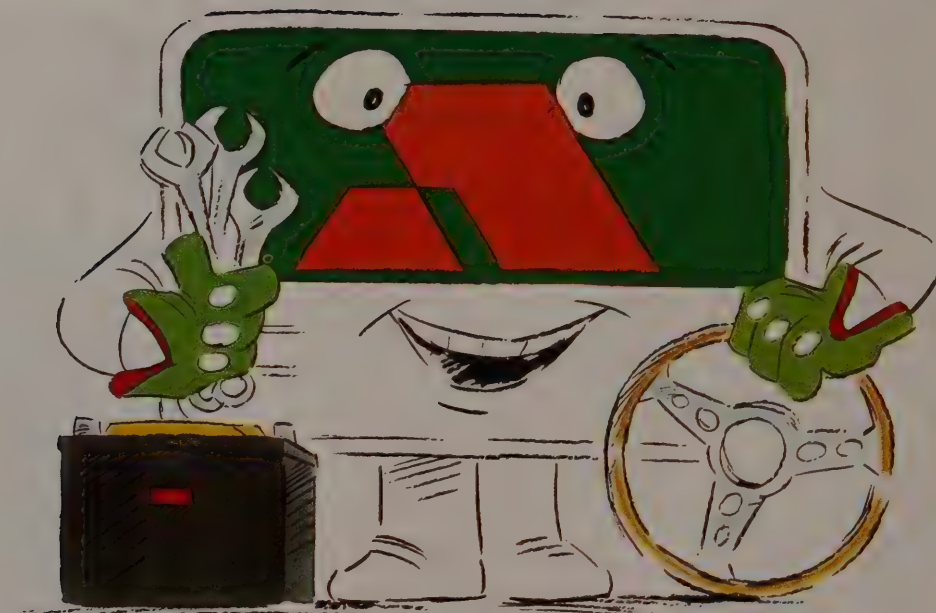
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VAN DER STEEN

A FIRST FRONT COMPANY

I'm great for car **Accessories.**



Access. Your flexible friend.

Bolt-on, stick-on, snap-on goodies!



WITH THE AVERAGE car costing more to run than many house-mortgage repayments, the wonder is that inflation-battered motorists have any cash left over to spend on their vehicles. Yet accessories and car-care products are big business. In fact, in 1978, British motorists spent £263 million on bolt-on, stick-on, snap-on goodies. Take in spare parts and servicing equipment, and the total came to a staggering £817 million.

What's more, sales are on the increase: according to the latest DRIVE Index of Motoring Costs (see page 9), motorists spent 15% more on accessories over the last year than in the previous year. And the reason for the boom? Paradoxically, the high cost of motoring.

In the five years to 1977, while the retail index doubled, motoring costs rose by 270%. And a new Mini—£677 in 1972—suddenly cost £1795. That was two years ago; today, it's £2289.

This has meant that those people who don't have new cars supplied by their companies every two or three years have been hanging on to their vehicles longer, which has encouraged them to pay out on products that promise to disguise the old workhorse's age—seats, head rests, seat covers, wheel trims and the gamut of car-care items, from chrome polish to shampoos and touch-up paints.

A growing awareness of safety has helped to sell fog- and spot-lamps, mirrors and child seats, in addition to the customising products such as vinyl-roof kits, coach strips and spoilers.

But the biggest item in the accessories market is in-car entertainment—ICE to the trade, radios and tape players to you. Ten years ago, ICE as an industry hardly existed; now, more than 2 million radio and tape units are sold each year, representing

a turnover approaching £50 million. How's that for a boom?

The spectacular expansion of the accessory market has transformed the retail pattern. Where once the garage trade held the major share of the business, it has steadily lost ground to specialist accessory shops, supermarkets, department stores and mail-order houses.

Accessory shops have blossomed in the last 10 years or so. Halfords claims to be the biggest retailer of motor accessories in Europe, selling £80million worth of goods a year to 35million customers. But this supremacy is being challenged by vigorous high-street multiples, such as Boots, Woolworths and Tesco. Meanwhile, petrol stations, having lost out to the high-street accessory shops in the early 1970s, have been fighting back with alluring, well-stocked shelves.

Looking into the future of the accessory business, two contradictory factors emerge: with

petrol prices rocketing and inflation generally taking off again, DIY activity is likely to spread still further; against this, at least half and possibly as many as 70% of new cars are now bought by companies rather than individuals, and it is difficult to imagine motorists buying accessories for a car they don't own.

Perhaps the 1980s will be the decade of the clip-on/clip-off goody...

THE ACCESSORY market has become so big that the motorist is often presented with a bewildering choice. There are, for instance, more than 100 car radios on offer, ranging from around £15 to £400-plus.

There are also numerous anti-theft devices, and all manner of seats and seat covers, child harnesses, extra lights, and—the big seller of the moment, for obvious reasons—petrol cans. Indeed, the AA mail-order division has been inundated with

requests for cans since the early summer, and there is now a waiting list of several weeks.

Inevitably, the accessory business has attracted its quota of sharks. Not only that, too many products are badly made, perform no useful function or merely duplicate existing items at a higher price.

So where can one go for impartial advice? DRIVE itself is a good starting point, regularly publishing details of products that have been awarded the AA Seal of Approval, as well as occasionally running its own investigations.

Probably the most expendable devices are those that claim to improve fuel consumption. DRIVE and the AA have tested no fewer than 130 over the last eight years, and the advice of Doug Houston, head of the Association's engineering research division, is: 'Don't waste your money.'

Houston runs the AA's Seal of Approval scheme—one of the motorist's best guides to worthwhile accessories. Introduced in 1972, it now covers more than 450 product lines, from vacuum cleaners to fire extinguishers, and roof racks to dog guards—the full list can be consulted at any AA regional office.

Under the scheme, manufacturers submit their products—and pay for the testing of items that the AA carries out. The test fee may be as high as £3000—and it is not refunded if the product fails. Once endorsed, items are regularly retested by the AA's experts. Despite the high fees and standards, the scheme attracts as many applicants as the AA's technical test centre can cope with, for the Seal is identified by manufacturers as an important aid to sales.

Testing is rigorous: a towrope, for instance, will be stretched from a height, with 176lb of concrete

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attached to it; seat covers are
rubbed up to quarter of a million
times by the AA's mechanical
'posterior'; and exhaust systems
are checked for three years.

No wonder more than half the
applications fail, or that original
approvals are withdrawn when
subsequent testing shows a
decline in quality. The Seal is
probably the best guarantee that
an accessory does what's claimed.

Good or bad, however, acces-
sories do not, on the whole, add
much to the value of a car. In a
private sale, it is possible that a
well-equipped vehicle will sell
more easily. Trade prices, how-
ever, are based much more on
mileage and general condition
of the car than on stereo units
and fancy seat covers.

Only items that cost a lot in the
first place—such as air con-
ditioning or an electric sunroof—
will have much effect on second-
hand values.

IT MAY BE hard to believe now,
but, barely five years ago, most
manufacturers of popular cars
were still reluctant to fit heated
rear windows as standard equip-
ment. On safety grounds, the
case for proper rear visibility
was overwhelming, but car makers
claimed that to supply a heated
backlight would add so much to
the price as to make the car
uncompetitive; and that, in any
case, motorists were not
interested in safety. (The same
sort of argument went on about
cloth seats, radios and a dozen
other items.)

What finally compelled a change
of attitude was competition from
overseas—particularly Japan.
When even the cheapest Japanese
cars arrived with long lists of
'extras' included in the price,
British and European manufac-
turers had to sit up and take
notice.

Ford, with a sharper eye for
market trends than most, took
the lead during 1975, announcing
that it was adding £14million
worth of equipment to its cars
without raising prices.

Leyland and the others quickly
followed, and it is now rare to
find any new car without a heated
rear window, cloth seats, carpet,
hazard-warning lights, cigarette
lighter, and childproof locks on
the rear doors. Curiously, radios
are still very far from being a
standard item, except on more-
expensive models: manufacturers
say their market research indi-
cates that radios come well down
the list of preferences and that
motorists like to choose their own.

Other factors have helped to im-
prove standard specifications,
one of the most obvious being
safety legislation. Until last year,
the only new cars that had to be
fitted with an outside mirror were
estates; now, all new vehicles must
have one. From this autumn,

every new car must also carry
hazard-warning lights, reversing
lights and a rear foglamp; in the
future, it is likely that rear seat-
belts will be a compulsory fitting,
front belts having been a legal
requirement since 1965.

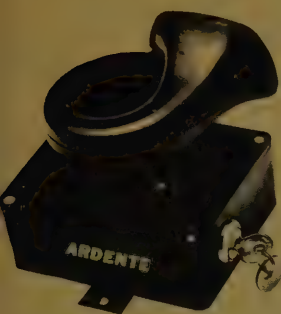
A third factor is that, over the
years, motorists have come to
expect a higher level of original
equipment—an expectation that
has been encouraged by the
dramatic rise in car prices. It
might have been acceptable to
offer the heater as an optional
extra on a £700 1972 Mini, but not
in 1979, when the same car costs
more than three times as much.
And, once having tried cloth seats,
few people want to sit on plastic,
which has the double dis-
advantage of being cold in winter
and hot and sticky in summer.

The trend towards better-
equipped vehicles will obviously
affect the accessory market. Sales
of heated rear windows and
outside mirrors will inevitably
decline, though it will be a gradual
rather than a sudden process.
And, in the meantime, accessory
suppliers are confident that, with
such things as rear foglamps
becoming a legal requirement,
it will persuade more owners of
existing cars to fit them volun-
tarily.

THERE ARE motorists, probably
the majority, for whom the car
is little more than a fridge or a
washing machine—a consumer
durable bought to do a job—who
need it only to start first time and
get from A to B without breaking
down. But there are others who
like to treat the vehicle like a wife
—or even a mistress: something
to be cherished, cosseted and
dressed up. It is to this band of
enthusiasts that the accessory
maker is pointing his wares.

The impulse behind the bolt-on
goody is to make the car that bit
different, to disguise the fact that,
basically, it is the same family
saloon that thousands of other
people drive. Just as a new hair-
do or a different shade of lipstick
can change a woman, so a car's
personality can be transformed
in all sorts of subtle—or un-
subtle—ways.

Wheel trims or embellishers
are an obvious start, or you can
junk the original wheels altogether
and go for those chunky sporting
jobs that not only add glamour
but sometimes help performance
as well—but only sometimes.
Plastic louvres fitted to the rear
windows make an immediate
impact; but give a lot of thought
before you splash out on a front
air dam or a boot-lid spoiler—
despite claims by some manu-
facturers that these will improve
mpg by up to 15%, in practice
they can actually cause over-
heating and, in some cases, side-
ways imbalance. It is worth
noting that Ford spent £2-£3



Car Burglar Alarm

NEW FAILSAFE EASY-FIT CAR ALARM FROM ARDENITE

A new, totally secure, easy-fit car alarm has been developed by security experts Ardenite, following direct requests for the development of such a system from motoring organisations.

Using a special voltage drop detector the system will not false alarm if the car is accidentally rocked, but any attempt to break into or move the vehicle produces frighteningly loud horn blasts to warn people outside the car and a deafening noise inside to terrify even the most persistent intruder.

A major benefit for the motorist is the fact that the entire alarm system can be installed by connecting just two wires. The unit has its own 'screech horn' but at the same time is compact.

After frightening thieves away the unit automatically resets itself in case any other person tries foolishly to interfere with the Ardenite protected vehicle. Also available, with simple installation, an alarm system that safeguards your boat or caravan.



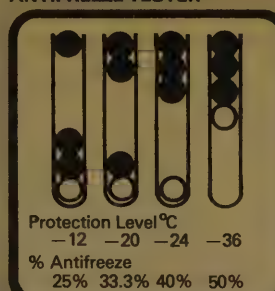
Fuller details can be obtained from:
**The Security Information Unit,
Ardenite Limited, 2 Thames Avenue,
Windsor, Berkshire. Tel: Windsor 63142**

TIPTOP

Battery and Antifreeze testers

This pair of Tip Top testers now enables you to check the condition of your battery and the degree of frost protection in your radiator. Small, extremely easy to use (just count the floating balls) and with a protective cover to prevent acid leakage, these testers are inexpensive and totally accurate. An ideal Christmas Gift.

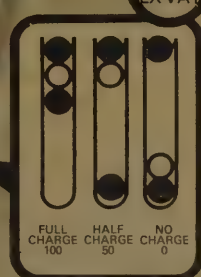
ANTIFREEZE TESTER



RRP
£1.18
EX VAT

Just count the floating balls!

RRP
£0.79
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BATTERY TESTER

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A Krooklok takes the worry out of leaving your car waiting, it brings peace of mind, helps you to enjoy life to the full—and you'll feel confident about having a car to go home in!

Krooklok cares for your car

KROOKLOK

the visible deterrent



Available from Halfords, Boots, Woolworths and all good motoring shops
Made by Brown Brothers Engineering Limited, Bedford Road, Northampton

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Tune it yourself
with the care an owner gives.

Gunson's Colortune 500

Petrol saver/see-through tune up plug. Recent figures show 60% of cars in the U.K. are wasting petrol because their carburettors are set too rich. **Colortune 500** shows the correct setting in seconds. Only £9.30 (+ VAT) R.R.P. Twin or Multiple carburettors would also benefit from tuning with Gunson's **Carbalancer** — only £4.50 (+ VAT) R.R.P.

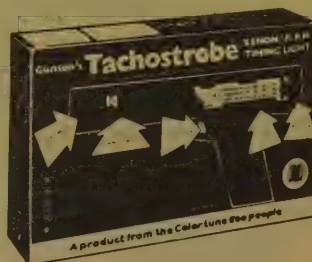


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Dwell/voltage test meter. Distributor points setting is inaccurate without a meter like **Sparktune 2**. Dwell settings mean exact accuracy however old the vehicle. Government figures indicate up to 7% petrol saving can result. Only £10.90 (+ VAT) R.R.P.

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Xenon/R.P.M. timing light. Timing the spark to occur in each cylinder at exactly the right instant to save petrol requires the sophistication of an instrument like **Tachostrobe**. Super bright white light and exact R.P.M. indication means more setting accuracy. Only £14.90 (+ VAT) R.R.P.



Gunson's D.I.Y. Money Savers together give a complete tune-up and will pay for themselves in a few weeks.

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Address _____

D11

million on research before putting air dams on just one of its models. Which just goes to show that there's more to fitting these aerodynamic extras than first meets the eye...

Stick-on body stripes available in varying shades of gaudiness, to brighten up the sides of the car or the bonnet, are of cosmetic value only. Tinted sun-strips attached to the top of the windscreen can also tell the world that you are 'Bob' and 'Sue' or whoever. Special radiator grilles are available for those who find the original too humdrum, but, if you're tempted to fit one, ensure that it protrudes no farther than the original did.

Auxiliary lights can give a sporting flavour, and are a useful safety feature into the bargain. Spot-lamps are, in effect, supplementary headlights, designed to give a long range of light, while the front foglamp has a wide, flat beam. Fog and driving lamps are often sold in pairs, or even combined in one casing. High-intensity fog and reversing lights are—as we say earlier—about to become compulsory on new cars, and are worth adding to existing vehicles, providing you comply precisely with the regulations.

First, ensure that the lamps carry the relevant approval mark. When fitted, they must be no less than 250mm and no more than 1 metre from the ground, and at least 100mm from the existing brake lights.

Inside the car, rally-style seats, high-backed like tombstones and with side and thigh supports, may appeal to aspiring Roger Clarks, with, of course, a 'competition' steering wheel. Others may settle for fancy seat covers, such as real sheepskin (or, for that matter, imitation sheepskin). Fur fabric is another popular choice.

Instruments out of the usual run include digital tachometers, altimeters, battery-condition indicators and water-temperature gauges. There are also devices to show the average speed and fuel consumption during a journey. A twin-trumpet air horn will make itself heard, and so will a reverse-gear alarm that sounds like a bird call.

A radio that plugs into the cigar lighter is another handy item, while, for those prone to five o'clock shadow, a similarly powered in-car 12v shaver may be the perfect answer—but pull into a layby first, won't you...

THINK OF EXOTIC accessories and you think instinctively of the world's best car. In fact, official policy at Rolls-Royce is that the car comes so comprehensively equipped, from air conditioning to electric seat-adjustment, that 'normal' extras are unnecessary. Since you are paying up to £61,000

in the first place, you might well feel that enough is enough!

For the man who has everything and still wants more, however, there are plenty of ways left by which one can embellish a standard Rolls.

A glance down the list of official extras reveals such items as an anti-theft alarm (£130), white-wall tyres (£85), an air-horn (£128), and a fold-down walnut picnic table (£266). Or how about a vinyl roof? Hardly in the exotic category, you might think, but the Rolls-Royce version is something else again—virtually hand-tailored—and it's £611 for a Silver Shadow.

Of course, you would expect electrically operated windows to be par for the course. In fact, this luxury is no longer necessarily a rich man's toy: Smiths Industries has just announced a system that can be fitted to any make of car for between £115–£120 a pair.

Back at the Rolls factory, the more flamboyant coachwork variations have largely been killed off by the need to meet EEC crash-test requirements, but there is nothing to stop you having the car gold-plated, or fitted with silk curtains—even Tudor-style oak beams.

And, if the scenery is boring as you relax in the well-upholstered luxury of your Phantom limousine, you can while away the time watching your favourite television programme—in colour, of course, for around £3000. But be warned: Princess Margaret tried it once, and said that it made her feel sick, but perhaps that was her choice of programme...

One Phantom owner had another idea for entertaining himself during the journey: he had the complete dashboard instruments duplicated in the rear section of the car, so that he could call his chauffeur on the inter-com (yet another accessory idea) to warn him to moderate his speed.

You can also call-up the outside world by telephone, though, for safety, this is best done while parked. Incidentally, there's no need to order a cocktail cabinet—it's standard on the Rolls. But a set of expensive cut-glass might raise the tone a little, and, for the weak-bladdered, a bolt-on loo can be provided—though you won't find it in Rolls' catalogue.

If, as Rolls owners tend to be, you are a diamond merchant and have to carry your gems with you, you can order a discreet safe.

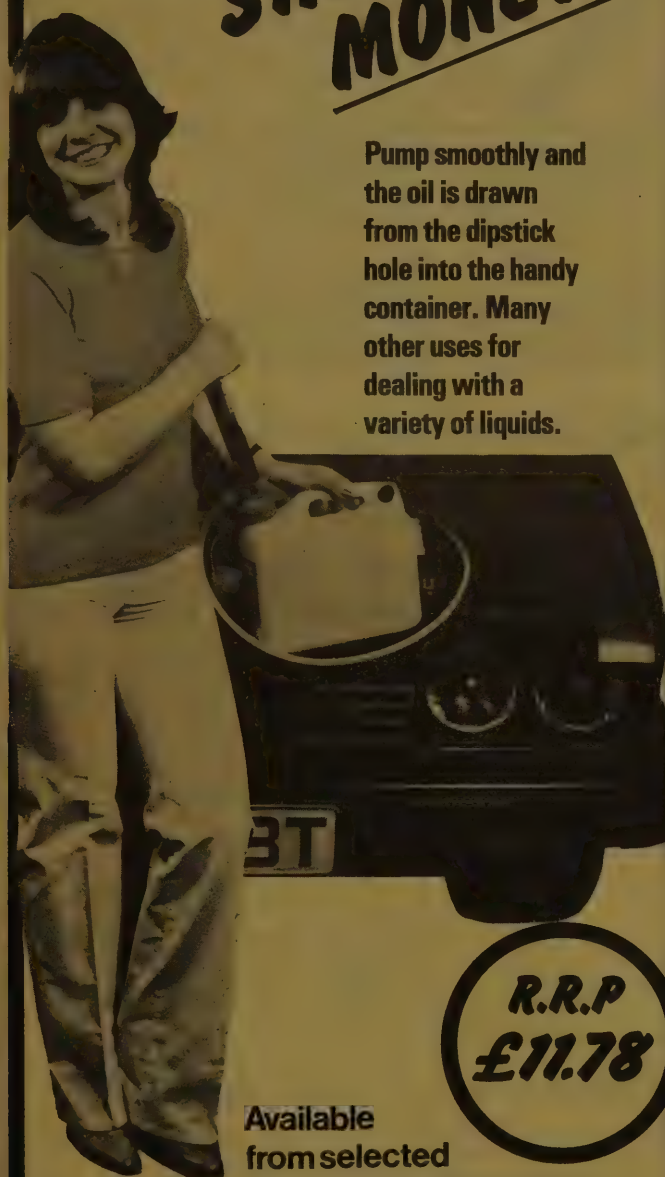
Finally, for the potentate who rides in daily fear of an assassin's bullet, Rolls-Royce thoughtfully offers an armoured car at around £200,000. But give plenty of consideration: it will double the weight of the car—and it's not hard to imagine what that will do to mpg performance.

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SAVE MONEY

Pump smoothly and the oil is drawn from the dipstick hole into the handy container. Many other uses for dealing with a variety of liquids.



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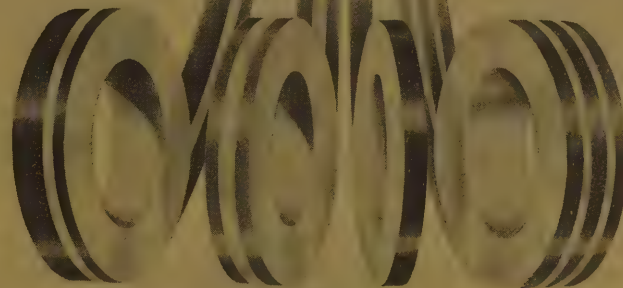
Available from selected Halfords, Woolco and all good accessory shops, or direct from:

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Stand out from the crowd with Karobes Stripe 2000. The eye-catching and subtle answer to instant appeal. A range of self-adhesive coachline stripes to suit all tastes. Four types of individual or multiple stripes in black, white, red, gold or silver. Easily applied, even round corners or curved surfaces. No less than 30 feet per roll — sufficient for most vehicles.



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Vehicle Alarm & Defence System

Is your car still where you left it? For while you are reading this advert it may have gone. You may not realise it, but a car a minute, on average, is stolen in the United Kingdom.

Defend your car against car thieves, vandals and joy riders. Fitted by you, easily; connection to car battery and a key switch protects all openings that operate interior lights. Anything that causes electrical drain on the battery, ignition etc. causes siren to sound. The alarm can easily be removed when you change cars. No worry or fuss.

What do you get when you become the owner of a BeeWare V.D.S.?

- Door protection on all doors with light switch fitted.
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- The siren, once switched on, will continue until switched off by you!
- Wind or vibration will not set the siren off. Completely electronic.
- PEACE OF MIND.

Please send me BeeWare Vehicle Alarms (a £37.00)

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Registration Number

Make and Model

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Because you left your lights on!

- LIGHTGUARD sounds, warning you, but is
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Full money-back guarantee

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THE DIFFERENCE COULD GIVE YOU 1,500 'FREE' MILES A YEAR.

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Small savings soon mount up. If you drive the national average of 9,900 miles per year and you choose a car doing 37 rather than 32 mpg, you will get 1,500 miles driving at no extra cost.

All new cars displayed for sale must, by law, display the Government's official mpg figures. Have a look before you make your choice.

If you would like your own copy of the official fuel consumption test figures covering all production models, just fill in and return the coupon.

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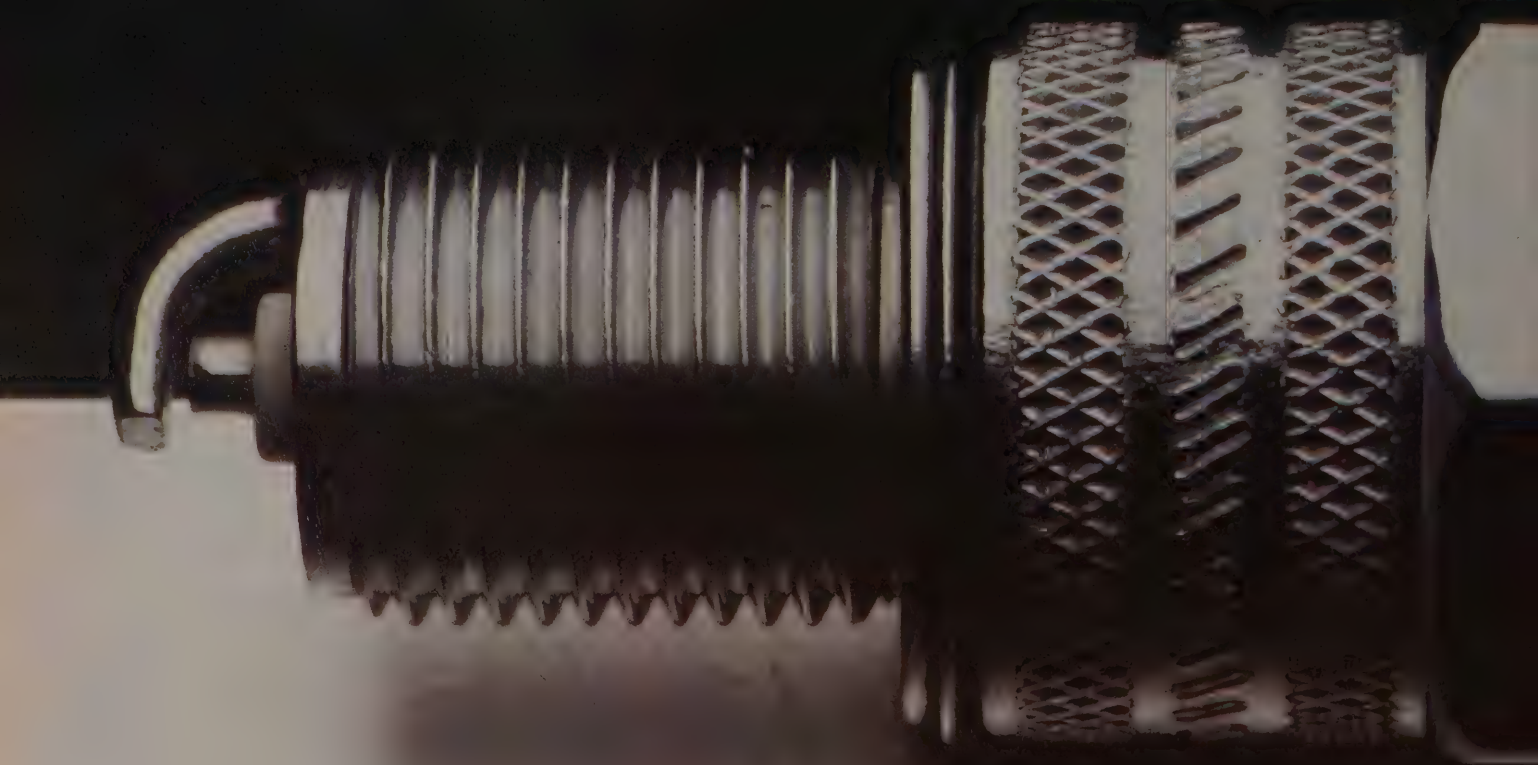
Fuel Consumption List, Department of Energy,
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Our new range of spark plugs fit British and foreign makes of car. Ask your Unipart Stockist.

UNIPART


Strokes of genius

IT TAKES a special talent to succeed at making both cars and motorcycles. Daimler was the first of many car makers to try—and fail. Peugeot and Humber managed to build the two with apparent success for a few years only before giving up, and Pierce Arrow also made a brave but unsuccessful attempt at motorbikes. Ariel, BSA, Scott and Brough Superior were among those who failed to graduate from two wheels to four.

The first firm consistently to master both arts was BMW. The Bavarian aircraft engine maker was forced at the close of World War I to produce motorcycles, the success of which led to BMW's takeover of a car factory... The advantage for BMW is that, at one time or another, the two and four-wheeled transports have provided a vital financial prop for each other.

BMW's commercial cunning hasn't been lost on Eastern rivals. Honda, the company that started in 1947 by fitting ex-army generator engines into bicycle frames, branched into car production in 1961. Now, the world's foremost bike maker is breaking its production targets with four-stroke machines—which tempted us to try a 250cc twin.

Honda has now been joined by Suzuki, whose small two-stroke cars have never been distributed in Britain, but whose four-wheel-drive lightweights now roam our roads and fields. As Suzuki made its two-wheel reputation with two-strokes (by acquiring the know-how of the E German MZ concern when one of MZ's experts fled the country), we chose a 200cc two-stroke.

Pitting a sporty 200cc two-stroke against a touring 250cc four-stroke might seem unfair (depending on your loyalties), but three intriguing factors influenced our choice: the relative economics of buying and running such dissimilar machines, their performance, and that hoary old favourite—the two-stroke v four-stroke rivalry.

Honda CB250N Super Dream Price £849

IN THE GOLDEN 1950s, the huge British bike industry was so busy making a fortune in the new American market that it saw too late the threat from Japan.

While Triumph was selling the smooth 650cc Thunderbird

tourer to young America, Honda timidly exported mopeds to Britain. Surprised by their ready acceptance, Honda followed up with 125cc machines, and then 250s. When the 250cc Dream reached Britain, in 1960, it shocked the boards of Britain's motorcycle makers into a tardy reaction. But the buying public saw the advantages and, with an increasing sense of guilt, turned from the magnificent brutes of Britain to the sophisticates of Japan.

Twenty years on, Honda's second Dream emerged. The sheer surprise of the first model's advanced performance has been replaced by a comforting familiarity; when you buy a medium-weight Honda you now know exactly what you're getting for your money—a well-made, sensibly designed, middle-of-the-road, reasonably priced machine without an extreme characteristic in its nature, all backed by a superb sales network.

If there's a Ford Escort of the bike world, the Super Dream is surely it.

The 250cc class of bike wins friends by offering the best traits of either lightweight or middleweight machines. Honda has plumped for the latter, producing an unusually comfortable, quiet and smooth tourer, rather than a nippy town runabout.

While the Super Dream can fill that role equally well, its hefty build biases it towards long weekend trips or luggage-laden rides with pillion and all. Generous dimensions mean that a fairing and panniers can be fitted without cramping rider or pillion. It's a man-sized 250—just the ticket for the owner who takes his lightweight motorcycle seriously, for—make no mistake—the oversensitive nature of an ultra-lightweight can be unsettling on long journeys.

The big-bike feel is heightened by a luxurious suspension that ripples over B-road blemishes and absorbs major potholes with equanimity, and the big, well-padded dual seat matches perfectly this rare quality in a lightweight. Honda has been paying a lot of attention recently to anatomies, or 'rider engineering', as it's called. Research has paid off handsomely for, without doubt, the Dream's long-distance comfort is the result of excellent machine/rider compatibility. In short, the Dream's a modern lightweight with all the security

and comfort normally found on expensive heavyweights after years of modifications.

No better example can be given than the gear-change lever's design. To achieve the perfect correlation between the angle of the rider's left leg, his foot position, the distance between foot-rest and gear lever, and the gear-change movement itself, Honda fits a neat linkage that is by no means the cheapest design possible, but which is certainly the best for rider comfort.

As is now expected, all the usual Japanese niceties are provided. There are two excellent handlebar mirrors, clamped in a manner that allows freedom of adjustment and cheap replacement should they break. Switchgear is functional yet good looking, but the turn indicators are mounted at the end of rigid metal stalks that expose them to knocks. It almost goes without saying that the engine is electrically started—backed up by a kickstarter, of course. Instrumentation is pleasing, though the usual array of warning lamps could be more usefully replaced by an ammeter and an oil temperature gauge.

Braking is, in the best modern manner, controllably powerful, even in the wet; but the Super Dream is broken by Honda's engine. While it is always silent, smooth, clean and reliable, it lacks the two basic requirements of a good tourer—low-speed power (torque) and fuel economy. Considering the technology that Honda claims to have invested in this power unit, it should be better in both respects.

Despite its 27bhp, the engine feels puny, especially at speeds under 7500rpm (75mph in top gear), necessitating frequent gear changing for every overtaking manoeuvre, incline and headwind.

For inscrutable reasons, Honda has vastly overgeared the Dream's six-speed box, equipping it with a top-gear ratio that's theoretically capable of almost 100mph. With a pillion rider up, open-road cruising at any reasonable speed is best achieved in fifth gear, which keeps gear-changing to a bearable minimum.

Could it be that the Super Dream engine's vibration-dampening balance shaft has absorbed the increased efficiency of the triple-valve combustion chambers? What is certain is that the first Dream averaged a fast-riding consumption of 66mpg in the days when petrol was only five shillings a gallon. Now, 20 years later, its successor manages a mere 56mpg for the same performance on petrol that costs anything up to £1.20 a gallon. The great irony is that the classic cruiser, the 30-year-old

650cc Triumph Thunderbird, gave at least 70 miles per 3s 6d gallon.

Suzuki GT200 Price £675

THE IDIOSYNCRASIES of the British bike market have enhanced the value of all 250s—probably beyond their true value. Provisional-licence holders are limited to a maximum engine size of 250cc and, coincidentally, this is also the approximate size of the most economically run all-rounder. The result has been the rise of the £1000 'economy' bike. On the other hand, the less popular 200cc bike suffers no such price-tag, and its performance is often similar.

Not only is the price of the Suzuki GT200 20% lower than the Honda Super Dream. Insurance quotes from a leading company for a hypothetical 21-year-old new bike owner vary just as much. The Honda 250 Super Dream would be a nightmarish £230 if he lived in a high-risk big city, and £172 in a low-risk rural area. The Suzuki GT200's premium would cost the same chap £184 and £120 respectively—a saving of 20% in the city and 30% in the country.

As far as petrol goes, the figures—to most riders' surprise—point the same way. Two-strokes are reputedly heavy on petrol, but the two-stroke GT200 is 8½% more economical on fuel than the four-stroke 250cc Dream.

If the Honda can be likened to a Ford Escort, the Suzuki is something of an MG Midget; car-owning bike buyers should not make the mistake of assuming that size alone is critical in the ownership stakes.

Though its dimensions are only

Ian Dawson



fractionally smaller than the Dream's, it weighs almost 1cwt less, and consequently handles like a bicycle, especially in the quick, almost nervous manner in which it responds to road irregularities and crosswinds. For young riders who revel as much in the feeling of speed as speed itself, the GT200 would be fun, but when touring on the open road the wee Suzy could be irritating at times. On the smooth test track, however, there was never a single moment of instability—regardless of how furiously the test machine was cornered.

Its light handling would best be appreciated by flyweight men or one of the fast-growing army of motorcycling ladies who, very

sensibly, demand a bike that can be manoeuvred simply and safely at ultra-low riding speeds. In these circumstances the GT200 cannot be bettered.

Starting is wholly reliable—even after overnight parking in heavy rain. The electric starter fitted is a sales gimmick (albeit a jolly nice one), for the kickstart fires the bike so readily that it requires only finger-tip pressure on the crank to start the engine burbling. The choke operates one carburettor only but, apart from a slightly lengthy operational period, it makes no appreciable difference, good or bad, to early morning riding.

Silencing is excellent, even under hard acceleration. All the controls are light and easy to use,

and the functional switchgear is attractively arranged. The seat is medium-comfortable, and the riding position acceptable even for a 13st six-footer, though cramped when a pillion rider and luggage are added.

Normally, the twin mirrors provide clear images, but when cruising at 70mph they resonate in sympathy with slight engine vibrations, and fuzz their reflections. But what fair-minded man could grumble at such a minor infringement of perfection in a diminutive motorcycle that can actually cruise well within its safe limits at 70mph. In fact, the test machine was cruised for lap after lap around the test track at an easy 75mph with complete smoothness and some power in hand.

This fine engine performance is matched by equally good braking from the twin hydraulic disc brakes. If anything, they are both a little too powerful, for wheel locking was none-too-difficult during experimental braking. Such power should never be required on the roads, however, as—unlike car drivers—motorcyclists cannot rely on powerful brakes alone to escape trouble.

A single key fits the ignition, steering lock, fuel filler cap, and helmet locks—which is all very well until it's realised that all locks brazenly display the key

number on their faces! Thieves must love parked Suzis.

As far as DIY owners are concerned, the GT200 is a dream. Few other machines offer such advanced performance with such simplicity. With electronic ignition taking the place of contact breaker points, this two-stroke engine is now simpler than the Wankel rotary. Apart from attending to the battery and rear chain once a month, adjusting the odd control cable and changing gearbox oil annually, a GT200 owner should have little to do other than ride.

One very welcome addition to Suzuki engineering is the use of Teflon-coating for the exterior of engine cases, cylinders and heads. This heatproof plastic will now eliminate that bugbear of most two-year-old Japanese bikes—the peeling of the protective anti-oxidisation lacquer and the start of engine rot.

So is a 200cc better value for money than a 250? On the face of it, yes—though whether this would still be the case if the Honda 250 Super Dream provided better low-speed pulling power is debatable. As they stand, these two motorcycle-turned-car makers' machines prove that it pays to consider a lot more than capacity alone when deciding on a new bike. Big isn't always best. **DAVE MINTON**

HOW THEY MEASURE UP	HONDA CB250N SUPER DREAM	SUZUKI GT200
Engine	Air-cooled sohc 4-stroke twin	Air-cooled 2-stroke twin
Capacity	249cc	196cc
Output	27bhp at 10,000rpm	20bhp at 8000rpm
Transmission	6-speed, exposed chain	5-speed, exposed chain
Kerbweight	404lb	290lb
seat height	31.5in	30in
max width	28.7in (handlebars)	27in (handlebars)
max length	83.3in	70.4in
Fuel tank	2.3gal/154 miles plus 7 pint reserve	1.9gal/137 miles plus 2.5 pint reserve
Mpg—overall	62mpg	72mpg
quiet use	83mpg	97mpg
suburban use	74mpg	94mpg
brisk use	70mpg	72mpg
hard use	50mpg	50mpg
Performance—max (upright)	80mph	77mph
0-50mph	8.5sec	7.5sec
30-50mph (top)	12sec	13.6sec
Warranty	12 months/unlimited miles parts and labour	6 months/unlimited miles parts and labour



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[†]Princess 1700L £4232; 1700HL £4552; 1700HLS £5043; 2000HL £4806; 2000HLS £5321; 2200HLS £5788. Automatic transmission £462 extra. Prices include seat belts, Car Tax and VAT; number plates and delivery extra. All prices correct as at 21/8/79



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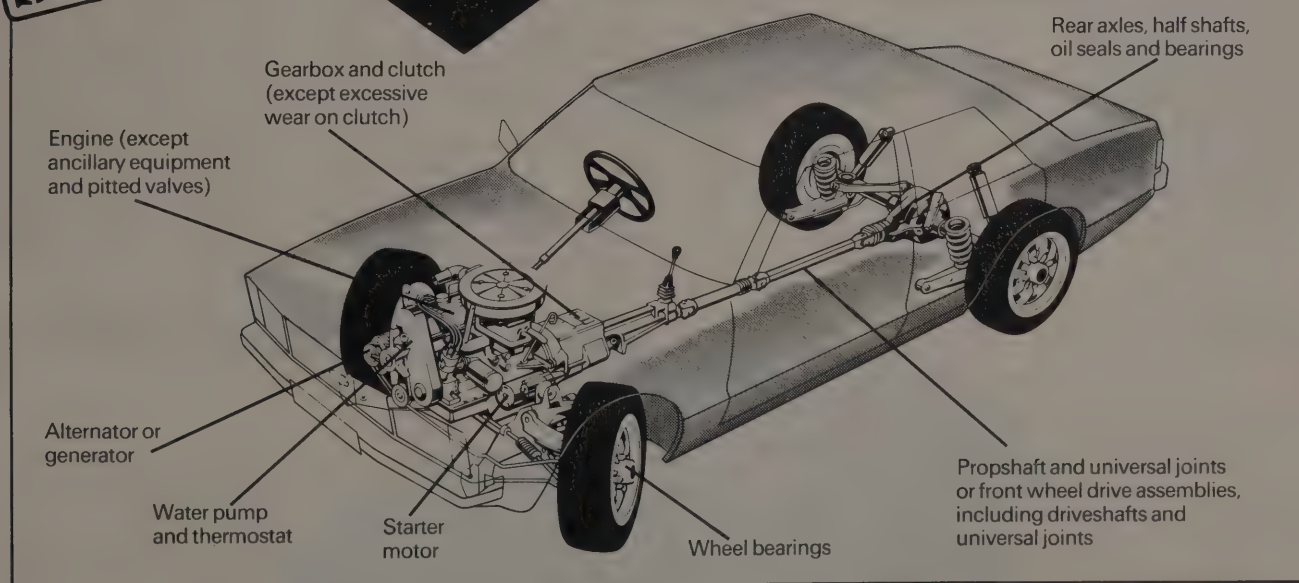
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WORLD-WIDE

Racing green

BAD news for car stylists, good news for gardeners: according to Italy's Pininfarina design studio, the most aerodynamically efficient shape for a car is that of a . . . **cucumber**. And a cucumber with its arch bottom-most and ends pointing up, at that. Pininfarina's wind-tunnel work on such a shape—a blunt, rounded nose, and a near-circular mid section that slims towards the tail—has resulted in a drag coefficient that's a fraction of that of most modern cars. Low drag means lower fuel consumption, so we can expect to see more of cucumber cars—but only if stylists like Pininfarina can cultivate it into a shape that will get past the marketing men.

1980 could see the grin wiped off the faces of diesel car owners. There's no doubt that diesel offers more miles per gallon and cleaner exhaust emissions than petrol. But diesel fuel is expensive to make—it takes more crude oil to produce a gallon of it than to make the same amount of petrol—and government leniency on **diesel fuel taxes** are unlikely to be so generous if significant numbers of car owners swell the queue for the DERV pump.

World-wide pat-on-the-back department. Last issue, I forecast increased use of **turbochargers** as a something-for-nothing way of getting top-end performance without damaging fuel economy. Now I hear that at least three of Japan's leading manufacturers—Toyota, Datsun and Mazda—are all developing turbocharger options for some models, for introduction within the next 12 months.

Next victim of the high cost of fuel could be BL Cars' flagship, the V12-powered **Jaguar XJ12**. Its thirst—few users better 14mpg, most get 12mpg or less—makes even the richest owner wince. Sales are also suffering from the fact that you can get a six-cylinder XJ6 that looks just like a 12, yet costs a lot less to run. Now, BL has moved accountant Percy Plant in to head the Jaguar division, with a brief to decide which of the bigger models should be axed.

IAN WEBB

DRIVE waited more than 10 years to begin long-term testing cars, and the series has been a success. But we haven't sat around congratulating ourselves: there had to be room for improvement. And one problem we think we have now solved is that of the Friday-afternoon car—the virtual one-off that is destined to be loathed by its owner from the word go. Here's how the new system will work: we'll press-on with the thorough checks of a reader's car, looking for faults and giving praise where it's due; but, at the same time, we'll run parallel checks on identical vehicles owned by the AA, hoping to show-up discrepancies and 'rogue' cars, or to find corroboration for our bouquets and barbed wire. We may not be able to do it every time, but we'll be trying hard. And this time, we've succeeded: the Austin-Morris Princess has a lot of critics and many enthusiasts. But one thing's for sure—there are a lot of them around.

Roger and Linda Farr, from Farnham, Surrey, admit that they spent a small fortune during 25,000 miles of Princess 1800 ownership. After a good start, the 1976 car seemed to change overnight, and, as Roger put it: 'No sooner had we repaired one thing than something else went wrong.'

So when the government increased VAT to 15%, 30-year-old Roger, who works for a printing company, made a spur-of-the-moment decision to buy a new car. But what to choose?

Said Roger: 'Although we were fed-up paying for parts for the 1800, other cars seemed even more expensive to buy—and foreign spares are certainly dearer. Then our local garage, Wadham Stringer in Aldershot, Hampshire, suggested a test drive in the new Princess 2000HL. Just to keep the salesman happy, I went for a short spin in the car . . . and enjoyed driving it so much that I didn't come back for an hour.'

'There had been a lot of improvements: it was more comfortable



Princess 2000HL: brand loyalty

A Prinny checks in and a TR checks out . . . as DRIVE's Long Term Test Club introduces significant changes aimed at giving you a broader and better picture of cars put under 12-month review

and the trim was smarter. I told the manager, there and then, that, if he gave me £2000 for my car, he had a deal.

'Without even looking at my car, he agreed, and found me a pre-VAT-increase car.' It left the Farrs with £2673 to find, including road tax, mudflaps, underbody rustproofing and power steering.

DRIVE queried the logic of changing to a bigger-engined car, with petrol so expensive and hard to

find. But the Farrs have three sons aged 10, 11 and 12, so they need a big car, and Roger is convinced that the 2litre will be more economical than the 1700 that has replaced his old 1800 in the Princess line-up.

The £220-worth of power steering was a must for Linda, who found that the old car was too heavy for her round-town driving.

The new car—like the old one—will be looked after by Wadham Stringer. 'I don't believe in doing



Ian Dawson

TR7: black marque

AFTER ALMOST a year with his blue Triumph TR7, Martin Davis has an attachment to the car which must be more emotional than physical: in 6000 miles, the car has been off the road for a total of nearly four weeks.

Martin, a 31-year-old bachelor and an ad-agency executive, saw the TR7 as the answer to his ambitions to own a sports car. The styling of the British car swung it for him, although he



rushed the dealer, I suppose I can forgive these faults.

'The oil leak, though, should be stopped as soon as possible.'

While the Farrs' car was starting its career, three identical and brand-new cars owned by the AA were getting a second PDI at the hands of our engineers.

AYP 463T

Interior lamp inoperative; off-side front door fitted poorly; off-side rear door handle stuck out when operated and locked; screenwashers requiring adjustment; numberplate lamp inoperative; driver's seat-adjustment lever fouling seatbelt reel; slight noise from facia—possibly speedometer; heater connection to cylinder-head adrift—potentially disastrous.

BHX 701T

Steering wheel 20 degrees off-centre; steering-wheel pad coming off; handbrake warning lamp intermittent; oil-pressure warning lamp inoperative; lower pinch bolt loose on steering rack splines; carburettor's dashpot oil low; bulkhead speedo grommet dislodged.

AYP 460T

Offside indicators inoperative; nearside wheel nuts not tight enough; bulkhead speedometer grommet dislodged; engine oil 2pt low; rear window winders stiff; choke control stuck in 'in' position; vibration at high speed.

The seven faults listed above are now the least of AYP 460T's worries: the car was, as the courts say, involved in a collision with a lorry, and, though our driver has recovered, the car hasn't—see

Stuart McPherson



above. Amazingly, it isn't a write-off, and repairs have been estimated at £2800.

it myself,' says Roger. 'These days, most people seem to spend their weekends under the car bonnet, and I don't think half of them know what they are doing. I'll have it serviced on time, and I won't thrash it. If it goes wrong, it won't be my fault.'

His car arrived at the AA's technical department with 350 miles clocked up, and engineer Bernard Tasker—a confessed BL fan—went to work.

The bodywork was in good

order, marred only by minor blemishes and a layer of wax that hadn't been removed at the pre-delivery inspection. Tasker found marks in the paint on the bonnet, the left screen pillar, the nearside wing and under a rear-lamp cluster. There was also a paint chip on the nearside rear wing, and the boot lid was difficult to close.

But the bad news came when the car went up on the ramp: Tasker couldn't miss the severe

oil leak at the gear-linkage remote-control entry plate—it was coming out as steadily as a dripping tap...

On the road, he noted that the car misfired under load, the driver's screenwash jet needed resetting, and there were some creaks from the plastic facia. Reverse gear baulked, but Tasker felt that this would ease with use.

He summed up: 'This is a good car, marred only by skimmed preparation. And since Mr Farr

chipped areas and a resprayed nearside door.

The rear numberplate had been secured with self-tapping screws, the points of which protruded into the boot; glue was oozing round the front and rear screens; and there was a hole in the carpet.

Warwick found no rust on the car, but he noted that the factory's efforts to prevent corrosion had been skimped. The rear fog-lamps didn't work, engine-oil level was far too high, the distributor advance pipe had come adrift and the timing was out.

On the road, our man noted a second-gear whine, a crunch when

selecting reverse and steering judder at 50mph.

Before his next visit to our workshops, with 2500 miles clocked, Martin'd had to call for help to start his car. The diagnosis of a blocked fuel line turned out to be wrong; after a struggle with the petrol filler cap, he found that the tank hadn't been venting and was simply caving in. It was changed under warranty.

Martin took his paintwork problems back to the dealer, Henlys, and the BL representative offered him a respray.

The car came back to DRIVE with

gave a few moments' consideration to Italian opposition from Fiat and Alfa-Romeo: 'I wanted to experience the sheer pleasure of having a car that was faster than a bog-standard saloon.'

Twelve months later, Martin is somewhat less than ecstatic—'given its history, I admit that I keep wondering what's going to go wrong next'—but remains remarkably loyal to the car.'

ON ITS FIRST visit to the AA technical centre at Basingstoke, a year ago, engineer Chris Warwick found dirt under the paint on several panels of the car, scratches on the boot and bonnet,

Martin still waiting for the jobs to be done. And Warwick found more: an oil leak from the rear-axle pinion housing; oil seeping from the gearbox; a leaking exhaust pipe; and an over-filled battery that had spilled over and damaged the paintwork—this last being 'down to' our owner. The righthand wiper arm was also fouling the windscreen surround and removing the paint. 'There is a good deal of attention required to bring this vehicle to a condition commensurate with its limited age and service,' said Warwick, grimly.

During the next 1000 miles, the car was resprayed—a Henlys

mechanic assured him it was normal for wipers to foul paintwork—and the seatbelts were replaced—the inertia-reel mechanism had become . . . well, inert. The driver's door lock had jammed—'I had to crawl across the passenger side feeling like a thief'—and, on a freezing cold night, Martin wound down his window . . . and watched it disappear completely inside the door.

AA engineer Bernard Tasker did the next set of checks at 4686 miles. He thought the respray was acceptable, but pointed to dirt under the nearside front- and rear-wing paintwork and a small area of the nearside door. Pinholing through the paint on a wing was also visible, with small runs at the nearside rear lamp cluster.

And now the driver's door didn't fit properly—a problem not untypical of TR7s . . .

The steering rack was oil fouled, and the original wheel judder was still there, along with a leaking offside rear damper and excess play on the nearside front wheel bearing. In fact, most of the old problems were still there, and Tasker's list grew to include 16 essential repairs and four desirables—'rather surprising for a relatively new car'. He noted: 'Their elimination should not cause too many problems for a competent repairer. The overall impression is favourable and, in some respects, it is probably the best TR7 I have driven.'

But time and miles ticked by, and all the problems remained. The car came back to us at 6745 miles and *nothing* had been done—but this time it was Martin's responsibility: he had been short of time and he hadn't been near a garage . . .

Tasker found him a few more problems to be going on with: the boot was difficult to open, and a short-circuit had knocked out hazard lights and horn.

Tyre pressures were all low—oh, Martin!—and there was worse to come: Tasker found too much steering play, a knock from the steering mechanism and excess play on the nearside front wheel bearing was now very much worse and needed *urgent* attention.

Tasker added: 'Technically, the vehicle is now unroadworthy in respect of the wheel bearing, steering and shock absorber, and, in view of the delay in repairs to the wheel bearing, warranty attention could well be refused. Martin seems to have lost some interest and the criticisms have as much to do with him as to any manufacturing deficiencies.'

The warning wasn't lost on Martin Davies: when DRIVE made a final call, the car was back at the garage for a belated service, and Henlys was busy . . .

Their sporting lives...

TELL US ABOUT your experiences with TR7 sports cars, we asked; we should have whispered it . . .

DRIVE has enjoyed a steady stream of readers letters since the Long-Term Test Club was launched, but, when the TR7 joined the party, the postbox started to stagger under an avalanche of gripes, moans and—yes—compliments, too. In total, they would fill a book; here's a selection of the . . . best?

Mr Walker, from Liverpool, began with a 'mild protest' that a T-registered TR7 may be anything up to a year old before registration—so what you might think is a Cowley-built car may in fact date from the troublesome days of BL's Speke factory, before it closed in 1978. That said, Mr Walker bought his new TR7 in 1977. On delivery, the self tappers on the rear numberplate were found to have gone right through the wiring loom. A new loom was ordered.

After 1000 miles, the loom had still not arrived, and, at 3000 miles, a split pipe from the master cylinder caused the clutch to pack up. At 6100 miles, the clutch failed again—this time a bearing had seized. And a noisy gearbox had to be stripped down. At 9700, the starter motor failed—just a loose wire, but the car was garaged for 21 days to rectify it and to replace a gaiter on the steering rack.

'I still feel it is value for money and, yes, I would buy another.'

Mr Bodys, from Luss, by Loch Lomond, was terse and not too sweet on his TR7. Faults listed included: wiper blade hitting pillar on fast setting; reverse gear crunching; accelerator sticking; boot and both footwells leaking; poor paintwork; wheels going rusty; *wooden blocks* found under suspension; ashtray falling out of door mounting.

'I received my car from a BL agent, near Glasgow, who carried out most of the warranty work, but found the bonnet stuck. Another BL dealer got the bonnet open . . . but dented it in the process. The car's looks and performance are good—the quality of the workmanship is the problem.'

James Miller, from Horndean, Hants, simply sent a list: 'Boot resprayed; offside rear quarter resprayed after dents discovered on delivery had been knocked out; leaking driver's door seal renewed; doors realigned; new

bumper cover—original was cracked on delivery; clutch slave cylinder attended to three times; 'pulling' front brakes attended to twice; new tachometer fitted; front crankshaft oil seal renewed; headlamp pop-up mechanism adjusted, as the pre-loads were incorrectly set—did this myself, as the garage could not find the fault.'

Mr Turner, of Westcliff-on-Sea, Essex, collected his 5-speed TR7 from Henlys in June 1977, minus handbook, Supercar documents and pre-delivery inspection checklist. His own inspection yielded 13 faults, including a severe oil leak, baulking reverse gear and rust under the bonnet.

From then on, things got worse, including a clutch failure, more oil leaks and . . . the list of faults reached 29. Said Turner: 'Some faults were rectified at the first attempt; others needed a second try; some never got done, being shrugged off as common to TR7s. I was losing days off work.' Yorkshirewoman **Mrs McLoughlin** bought her TR7 in October 1977, and found great difficulty in getting into first gear, as well as a persistent whine in second. 'The throttle would stick constantly, which you can imagine was quite dangerous! I have since returned to Ford.'

A sticky throttle featured in another long list of faults on an August 1978 TR7, owned by Londoner **Miss Pearl**: 'While driving up the M1, the accelerator jammed, and I had great difficulty pulling on to the hard shoulder. The rev counter spun off the dial before I turned off the ignition . . . On the other hand, it once refused to start for three days, which baffled Henlys. Each time I drive it, I expect it to go wrong, stall or something.'

'When this car works, it is a joy to drive—but it prefers being in the garage,' said Londoner **Mr Sherlock**. 'I bought it in December 1976, and it went perfectly for 12,000 miles. Since then, I have bought clutch plates, gearbox casing, head gasket, a new piston, radiator, battery and alternator.' One reader won his TR7, so perhaps he could afford to be biased. But the lucky lad—who asked to remain *anonymous*—told us 'My car has been left outside all winter, has never failed to start and has yet to let me down.' His few complaints include synchromesh 'going' on second gear, rear brake cylinders semi-seized, and the garage's inability to keep the car in lasting tune. 'I'd certainly buy another,' he wrote.

'All the faults listed in your original article were apparent in my August 1976 car, with the addition of badly fitting doors,' declared **Mr Palmer**, of Whitfield, near Dover, tersely. And **Mr Bowditch**, from Streatham, London, sent a copy of his complaints about his September 1978 TR7 to BL's managing director. His main trouble was that his car jammed in first gear and refused to disengage. 'It goes without saying that I'm very disappointed with the service I have so far received,' he concluded.

But it took poor **Mr Joyce**, of Cringleford, near Norwich, an 11-page letter to tell us all his motoring problems. It ended: 'After the April 1978 car had been back to the dealer about 15 times, Mann Egerton offered to buy it back for £80 less than I had paid for it. I don't suppose you call three months a Long Term Report, but it was long enough for me.'

ROBERT OXFORD



LEGAL

Given enough rope

ALL THROUGH breakfast, Jack Rowley had listened to the labouring of his neighbour's starter motor. Rowley, a 53-year-old butcher in Manchester, was always ready to help a friend in need, and as he stepped out of his front door he could tell that Peter Cole's ageing Ford Cortina was not about to start. And 15 minutes under the bonnet only proved the point.

Cole couldn't waste any more time on the car, and rang a local garage, two miles away, to call in professional help. The garage couldn't turn out at a moment's notice, but told him: 'If you can get the vehicle to us, we'll try to get someone to take a look.'

So it was that Jack Rowley came to be towing Cole's old Ford.

Perhaps the rope wasn't long enough, but that certainly wasn't the pair's main problem. Soon after they had set off, Rowley had to slap on his brakes at a mini roundabout. Cole reacted in time . . . but, with the engine dead, the Cortina's brake servo wasn't operating. Cole's gentle prod turned into a panic stamp on the pedal, but it was too little too late, and his Ford Cortina ploughed into Jack's well-kept Triumph.

'Why the hell did you stop like that?' Cole moaned. By the time the police arrived on the scene, the pair were almost at each other's throats.

The local sergeant took in the

Letters

Views to air? Tell DRIVE about your motoring and what it means to you. You can send letters for publication — unstamped — via DRIVE Directory, FREE-POST, AA, Basingstoke, Hampshire RG21 2EA

Smile, please

World-wide (July–August) included an item on a camera-linked speed trap.

Some 15 years ago, a similar device was used near the Hague, Holland, but had to be abandoned because many a wife, on opening the subsequent official letter, found a picture of her husband driving in the wrong direction (not on the way home) at the wrong time (he said he was working late) with the wrong female. Capt J C Petschi Guildford, Surrey

Veteran Volvo

According to independent research in 1977, the Volvo was proved to be the longest-lasting car, on average. I have searched several libraries for the actual number of years that was quoted at the time of the report, without success. Can you help?

Ian Clyde

Dunfermline, Fife

The report was probably produced by AB Bilprovning, which carries out the Swedish equivalent of the MoT test. By calculating scrapping frequencies, it came up with a life expectancy figure, and the latest calculation for Volvo models is 17½ years—Editor

On the buses

I would suggest that your correspondent Mr Clare (July–August) becomes a bus driver for three months. He would then get an inkling of what bus drivers have to put up with.

I now drive an ambulance after 12 years on the buses, and I am still putting up with selfish drivers who seem to think that £50 a year entitles them to be kings of the road, and woe betide anyone who gets in their way.

W F H Ritchie

Concord

Washington, Tyne and Wear

Request stop

My experience is that motorists show little or no courtesy to us bus drivers—especially when we are pulling out from a bus stop. I would like to remind them that the Highway Code requests motorists to give way to buses in this situation.

T Diani

Eastwood

Leigh-on-Sea, Essex

Seeing red

I trust that Mr Clare is not one of the growing number of private motorists to whom the sight of a bus pulling out is an open invitation to accelerate and beat it at all costs.

I might add that few motorists appreciate the acceleration and performance of the new generation of buses. Motorists who race them do so at some considerable risk.

N C Hands

Herne Hill, London SE24

continued overpage

scene, and issued a judgement worthy of Solomon: without a brake servo, Coles' vehicle was a danger to other road users—an offence under the catch-all regulation 90 of the Construction and Use Regulations. And Rowley had clearly been aiding and abetting the offence!

The magistrates court subsequently agreed, and both neighbours were found guilty. True, they were given conditional discharges—a cost-free lesson—but the real cost was that a lasting friendship had reached breaking point.

Jack Smith, manager of the AA's head office legal department, has every sympathy, especially with well-intentioned Rowley, but he takes a hard line on helping your neighbour. 'I genuinely feel that my advice would be—don't do it. Help your friends by getting a professional to do the job rather than take this sort of risk.

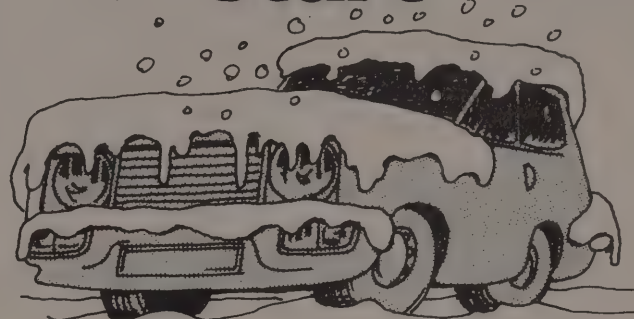
'An accident like this happens once in a blue moon—but you

could live to regret your Good Samaritan act. And remember: those construction and use regulations apply not only to vehicles but to the way they are used.

'Even if they didn't find themselves in court, a Rowley-and-Cole team might find themselves in hot water with their insurance companies. I don't think their claims would be repudiated, but, if a large sum was involved, the companies could go looking for a way out. That could turn a neighbourly act into a legal battle.'

If, despite Smith's warning, you still decide to chance your luck at towing, remember that the towed vehicle is, in law, a trailer, and one legal requirement is that the tow car's registration number must be displayed at the back. The rest is common sense, but don't be tempted to use your washing line—a proper towrope is a specialist tool, and it is essential for doing the job safely ... and happily. ROBERTOXFORD

How to put a warm heart into a cold start



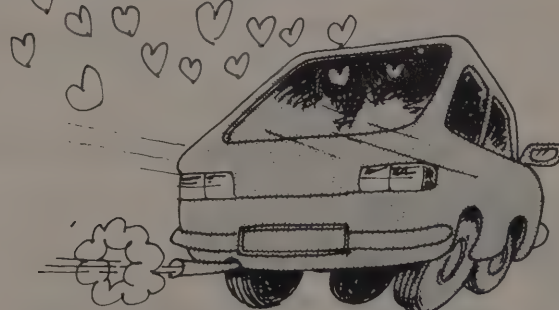
Cars can be distinctly temperamental in Winter. Frosty windscreens, cold seats, condensation, chilly steering wheel and cold air where hot air ought to be! Altogether unfriendly.

Fortunately, it need not last long. Feelings are transformed once the engine warms up - and that's where a Waxstat can help.

A genuine Waxstat thermostat, fitted to your engine, gives your car a rapid warm-up. Heaters work sooner and blow hotter air; driving quickly becomes comfortable. And, because visibility clears earlier, motoring safety can be improved. Furthermore, rapid attainment of optimum engine temperature actually saves you fuel.

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6303 G

No smoking signs

To try and ban smoking (DRIVE July-August) is as illogical as banning sniffing while ignoring the prevention and cure of the common cold. Smoking is a symptom of stress, frustration and boredom. Reduce these, and you'll reduce smoking. Here's how, on the road:

Decrease the 'no left turn', 'no right turn' and 'diversion' signs that so often return a driver to the busy main road he is trying to avoid. And take steps to abolish the rush hour, with its toll on time, temper, health and petrol.

Give plenty of warning of obstructions before it is too late to turn off. And provide places in towns where motoring strangers can check their map to determine that they're on the right course.

Alice Godley
London SE14

Lock out

A recent DRIVE pointed out that it is unsafe to drive with all doors locked from the inside.

I live in an area of Bristol where there have been several attacks on women in the last year; also it is not unknown for drunks to try to open car doors when drivers stop at pedestrian crossings or traffic lights.

If I am driving on my own after dark I *always* lock the doors to

protect myself from assailants. Indeed, I was advised to do so by a police road safety officer, who told me that, in the event of a crash, they could always get me out.

Miss E M Newton
Clifton, Bristol
See also page 8—Editor

Y DIY?

In the Sept-October issue it's stated that self-service filling stations now comprise 18% of retail petrol outlets and sell 50% of all petrol.

With the savings in wages and other costs, these were supposed to offer a cheaper service to the motorist. But it just has not happened. For pumping his own petrol and getting his hands (and sometimes shoes) filthy and smelly, the driver has always had to pay 'standard' prices.

In the United States and other countries, this type of filling station seems always to offer discounted prices.

James Pollen
Girvan, Ayrshire

Some you win . . .

After the last few months, I can readily believe that noise and vibration can trigger mental and physical exhaustion while driving (DRIVE July-August).

My Renault 5 automatic, pur-

chased last March, developed an engine knock similar to that produced by a typical piston fault. The manufacturer informs me that it is not a defect, but a 'characteristic feature' of the model.

The racket drives me bonkers. Are there any other readers developing a Renault 5-automatic nervous twitch?

W A Kinsman
Oulton
Stone, Staffs

. . . some you lose

I read with interest your recent test report on the Morris Marina 1700HL. Having now completed some 6000 miles in the same model, I feel that I must reply.

When I bought it, new, the dealer was able to offer me the choice of all the options and colours in the range. In my view the engine is a world-beater, and the vehicle a perfect example of good design, engineering and finish; in fact, British workmanship at its best.

I take particular exception to your remark that it lacks total reliability. With these four words, you probably cost BL many sales. As a responsible British magazine you should be backing home products to the hilt, with even a bias against imported cars. Why not initiate a 'British is best'

campaign and invite readers to tell us about their *good* British cars? We are the people who can put BL on top of the pile, and, if they keep manufacturing cars like mine, that is where they should be. Surely.

J W Bissett
Pilgrims Hatch
Brentwood, Essex
Right then, let's be having those letters to support or, indeed, challenge Mr Bissett's remarks.
Editor

Airlines go US

I am becoming increasingly concerned by the number of petrol stations that have broken or faulty airlines. Could it be that, since the recent petrol shortages, garages no longer need to attract customers on to their forecourts by offering peripheral services like free air?

We are constantly reminded of the importance of regularly checking tyre pressures as a safety measure. Yet the other day I had to try four garages before I came across an airline that was in working order.

J G Yates
Bromborough, Merseyside

You pays your money

In car test reports, it always surprises me that, even in favourable write-ups, there are often

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Most up to date rust inhibitor known to science?

Waxoyl's rust inhibitor sets it apart from all rival systems. Believed to be the most up to date (according to world surveys) because Waxoyl polarises on to the metal, prevents electrolysis, halts corrosion. Prevents reactivation! Never exhausts itself with time, like chemically activated types used by many rival rustproofers.

TRADE HOUSES CHARGE UP TO £80 for rustproofing, mostly for labour. DO-IT-YOURSELF with Waxoyl at only ONE TENTH of cost. Pay simply for raw materials at manufacturers' prices. Save up to 50% on many competitors' materials. Needs no further attention apart from 30 sec. wheel arch Autumn check.

Waxoyl micro rust inhibitor molecules resemble tadpoles! 'Tails' penetrate oil, grease, mud with magnetic speed attracted to metal like dust to LP records. With deadly efficiency molecules sink deep

into every minute pore within entire vehicle surface. Replaces air moisture stops and KILLS iron oxide rusting. Tadpole 'heads' seal off metal with continuous water-repellent skin. RUSTFREE CAR 'sleeps out' immune to winter rust havoc; vicious road salt, rain, mud, slush. Deep within metal pores. Waxoyl NEVER STOPS WORKING!

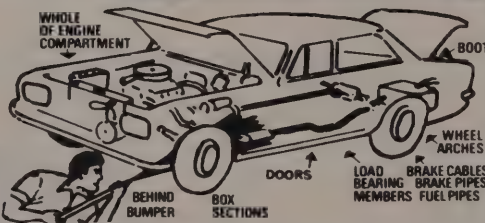
WAXOYL KILLS rust outright, doesn't just slow it down. Send now. Per return despatch with easy, illustrated instructions.

KILLS SUMMER DAMP HAZARDS on wet, sticky days. Protects raw metal edges within sills, box sections, door panels as trapped condensation drips into pools of moisture, even in garaged car. FORGET CORROSION!

● Barclay/Trust card payments accepted (Please quote No.) Use 24 hr phone ordering service.

EASY! QUICK! AND CLEAN!

NO NEED TO CRAWL UNDER CAR (in most cases). Finnigan's Applicator forces airless spray into entire car underbody. **HEAVY COATING.** One gallon equivalent to THIRTY aerosols at one sixth of cost!



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LIVENS-UP OLDER CARS. Revives 'tired' electrical insulation. Disperses water in plugs distributor. Instant wet weather starting. One coating outlasts engine. Wax content lubricates. Saves repairs. Restores trade-in value. Eases door closure, smooths window mechanism. Silences road noise, hidden squeaks and rattles. Use coupon now.

MIN. PREPARATION. NO SKILL. NO SPECIAL EQUIPMENT. Thin dust layers act as 'binding' agent. FINNIGAN'S APPLICATOR rustproofs wheel-arch in only 30 SECS! Forceful airless spray up to 4ft long. 100% EFFECTIVE SWIRLING ACTION and shaped nozzle, sprays right into small screw holes. No drilling. No mess. No waste.

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WAXOYL DOES AS IT SAYS. Kills rust. Users report: SWISS GOVT. LAB TESTS: 'Rust stopping qualities very good'. CITROEN CAR CLUB: 'Fantastic stuff'. BRITISH STEEL CRP: 'Most satisfactory'. SWISS AUTO RACING A.G.: 'Clean, easy application. No after-cleaning'. WESTERLY MARINE, PORTSMOUTH: 'Waxoyl protection excellent on marine diesel oil tanks'. (Tank bases otherwise impossible to rustproof, standing on supports). MOTOR MAGAZINE: 'Remains active indefinitely'. CHRYSLER CENTRE, BASEL: 'Application so clean. Entirely satisfied'. ROVER SPORTS REG. MEMBER: '197,000 miles. No sign of Waxoyl penetration'. LEICESTER: 'On '72 Beetle,

since new; extremely satisfied'.

NEVER COMPACTS WITH AGE Waxoyl flexes with vibration, outlasts conventional underbody seals that as you've probably observed, often oxidise; crack, flake off. Expose metal to air moisture rusting. Waxoyl actually benefits existing body seals, prolongs life. Makes and keeps them soft and supple. As further bonus, Waxoyl re-seals broken areas. Kills invading rust spores. Holds top book price value!

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ORDER DIRECT. Personal callers welcome 9 till 4.30 Mon.-Fri. MINI & 1100 SIZES, 5 litres (1.1 gal.) £5.95 + £1.50 carr. LARGE SALOONS: 10 litres (2.2 gal.) £10.95 + £1.50 20 litres (4.4 gal.) DRUM £19.50 + £1.50. Finnigan's Applicator £2.08 + 34p p/p. TRIAL OFFER: 500 ml (.88 pt.) TIN for your trigger oil can test behind chrome strips (or brush on door edges, free brake linkages, etc.). Watch Waxoyl chase water off a simple metal strip. Quite amazing! Send £1.08 add 62p p/p.

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<input type="checkbox"/> 20 litres	Name
<input type="checkbox"/> Applicator	Block Caps
<input type="checkbox"/> Trial Offer	Address

Regd Office 354 180 (London)

Surely most motorists would be prepared to pay a little more if cars included as standard items such things as stainless-steel exhausts, good paintwork, doors that close without slamming, laminated windscreens, adequate room for rear seat passengers, and first-class seats.

Heaters, too, leave a lot to be desired, and fresh-air systems could surely be quieter. And let's have better spacing of the foot controls, smooth gear changes and draught- and noise-free windows.

F A Nichols
Ferring, W Sussex

Waste not

In reply to Mr Morley (DRIVE July-August), the Ffestiniog Railway at Portmadoc, N Wales, and the Worth Valley Railway at Haworth, W Yorkshire, both welcome waste engine oil (not mixed with other contaminants).

In the case of the Ffestiniog, contact Rob Halton at 7 Thornhill Close, Wantage, Oxon, who will be pleased to advise would-be donors.

A R Goode
Bingley, W Yorks

Passing thought

Drivers who hog the centre lane on motorways, refusing to return when the nearside's clear, make my blood boil.

I'm seriously thinking of fitting a pull-down blind to my rear window bearing the words: 'Keep to the left except when overtaking'. Perhaps the thoughtless will get the message next time I'm obliged to switch from the nearside to the offside lane in order to see round him.

L J Gold
Newcastle-under-Lyme, Staffs

It's who you know...

Most experts recommend motorists to go to the larger garages for their repairs, giving the backstreet or one-man business a wide berth. In my experience, it has always been the one-man business that has given the best service and satisfaction—especially where electrical and carburettor faults are concerned.

You may have to shop around, but once you find a good one-man business, it will be competent, trustworthy and fair. I am not championing this just because I happen to be self-employed, I'm just someone who has had to learn the hard way.

J W Page
Ealing,
London W13

DRIVE TRAIL

AA

Read this page slowly. It's almost the last one, so there's no point in rushing a good thing. Unless, of course, you're rushing to get TRAIL—the fast-growing sister-title to DRIVE, for outdoors people. You might catch Issue 10's big tests of all-weather caravans and all-season sites. Too late? Then grab Issue 11, out 29 Nov, which ends weeks of speculation about the winner of our Campsite of The Year Award. AND you could see the New Year in with the next DRIVE's tests of flying machines—Ford's Granada 2800i Ghia and Renault's Gordini. Looks like a lot of trips to the newsagent's, so let us save you time and petrol by delivering to your door. Just complete and send FREEPOST one—or both—of the subscription coupons below



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D60

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D60

will be given the perk of a company car... which in turn will have the effect of putting more privately-owned, smaller-engined models of relatively low mileage into the secondhand arena.

But generally, for dealers and buyers alike, it's a case of 'wait and see'. Will big cars be in demand once more? Will the price-gap between used and new models narrow? Will anything be quite the same again?

The answers to these questions, it seems, will not be known until at least next spring... after, as Shakespeare so aptly put it, a car-trade 'winter of discontent'.

THE FINDINGS of used-car outlets around the UK are more or less in line with those of Computacar which, involved with dealings only in London and the south-east, is the only car-sales organisation in the country to keep up-to-the-minute statistics.

Since the rise in fuel prices, Computacar reveals that there has been a number of changes to the list of most-sought-after cars. The ever-green, 21-years-young Mini is up from 4th to 2nd place behind the Ford Escort; while the Volkswagen Golf and Ford Fiesta are new entries in the Top 10, in 7th and 8th places respectively. The Ford Granada—10th before the crisis—has dropped out of the chart. In contrast, the Renault 5 has climbed to 5th position.

Curiously, the DRIVE study shows that demand is small for second-hand Fiat 127s and Renault 4s—both economical saloons. There is little call, either, for the Chrysler Alpine, Horizon and Avenger, Renault 12, Alfasud, Peugeot 504, Vauxhall Viva and BL Princess.


There are strange regional differences, too. Secondhand Minis, for example, appear to be less popular in the north and in Scotland than elsewhere; demand for the Ford Cortina 1.6 seems less marked in the south; and the Fiesta is not among the listed favourites in the west of the country. The Austin Allegro and Datsun Sunny, on the other hand, appear to be most popular in the north, and the VW Golf in Scotland and the Midlands.

Top 10 used-car sellers in August (April placings in parentheses): 1 (1) Ford Escort; 2 (4) Mini; 3 (2) Ford Cortina; 4 (3) Ford Capri; 5 (7) Renault 5; 6 (6) VW Beetle; 7 (-) VW Golf; 8 (-) Ford Fiesta; 9 (5) MGB; 10 (9) Morris Marina.

Source: Computacar.

Top 10 new-car sellers in August (April placings in parentheses): 1 (1) Ford Cortina; 2 (2) Ford Escort; 3 (4) Mini; 4 (7) Austin Allegro; 5 (8) Morris Marina; 6 (6) Ford Capri; 7 (3) Ford Fiesta; 8 (-) Vauxhall Cavalier; 9 (-) Datsun Sunny; 10 (9) Vauxhall Chevette. Source: Society of Motor Manufacturers and Traders.

ROY JOHNSTONE

	AA Road Test Report No	Date	engine cc	mean top mph	acceleration 0-60 in sec	overall mpg	insurance group	MODEL YEAR								
								Average secondhand price guide								
								1979	1978	1977	1976	1975	1974	1973	1972	
MAKE AND MODEL																
Alfa Romeo Alfalusd 1.3ti	D5/78	3/4/78	1286	98	12.5	34.5	5	2875*	2725	—	—	—	—	—	—	—
Audi 80L	389	6/76	1297	91	14.2	31.75	5	4260	3470*	2725	2180	1760	1365	1190	—	—
100LS	314/R1 139	1975	1761	100	12.7	29.25	5	4855*	4160	3490*	2330	1935	1585	1290	1040	—
Austin Morris Mini 850	340	5/74	848	73	26.1	41.0	1	1995	1715	1480	1270	1075	920	780	655	—
Mini Clubman saloon	410	1/77	1098	82	18.2	40.5	1/2	2415	2075	1785	1525*	1305	1110	950	795	—
Allegro 1300 Mk2 4-dr	377	2/76	1275	85	19.0	37	2	2860	2445	2075	1765	—	—	—	—	—
Allegro 1500 estate	RI 127M	1975	1485	90	16.6	34.25	3	3250	2770	2350	1985*	1660	—	—	—	—
Maxi 1750 Mk2	263	1/72	1748	90	14.6	28.75	3	3310	2825	2410	2035	1725	1445	1205	995	—
Princess 1800HL	397	8/76	1798	96	14.2	29.75	4	3790	3490*	2455	2105	1785	—	—	—	—
Princess 2200HL	RI 129N	1975	2227	105	12.7	26.5	4	4235	3940*	2500	2105	1785	—	—	—	—
Marina Mk1 1800 4dr	295	1/73	1798	96	12.8	31.5	3	3085*	2590	2210	1880*	1595	1340	1125	940	—
MG Midget Mk3	205	2/70	1275	93	14.8	29.1	4	2800	2410	2070	1745	1465*	1235	1040	880	—
MGB Mk3	243	4/71	1798	105	11.8	23.9	6	3690	3345	2850	2405	2030	1685	1415	1190*	—
BMW 520 i	327	12/73	1990	111	9.7	29.0	S/R	—	—	5470	4435	3615	2900	2305	—	—
Chrys/Talbot Sunbeam 1.6S	D6/78	3/4/78	1598	95	13.9	33.5	3	3365	2885	—	—	—	—	—	—	—
Avenger 1.3 2-door	337	4/74	1295	93	19.0	30.5	2	—	2395	2055	1510	1290	1100	940	—	—
Avenger 1.6GLS auto	339	5/74	1600	93	13.9	26.5	4	3485	3050	2615	1905	1575	1340	1145*	—	—
Alpine S	381	4/76	1442	97	14.3	32.0	5	3695	3260	2775	2360	—	—	—	—	—
Hunter GL 4-dr	234	1/71	1725	86.5	15.0	28.7	3	—	—	—	1755	1485	1240	1035	855	—
Citroen 2CV6	RI 118	1975	602	66	37.2	44.0	1	1835	1465	1235	1040	880	—	—	—	—
Dyane 6	366	3/75	602	70	29.5	47.0	1	1945	1545	1290	1080	905	755	630	520	—
GS Club	384	5/76	1222	93	17.2	33.0	4	2685	2200	2005*	1490	1215	985	800	630	—
CX2000	416	5/77	1985	107	12.7	29.25	6/7	4555	3615	2975	2455	2130	—	—	—	—
Colt Lancer 1400GL 4-dr	371	11/76	1439	94	12.9	34.0	5	3210	2650	2220	1850	1515*	—	—	—	—
Datsun Cherry 100A 4-dr	284	8/72	988	83	17.7	41.25	3	—	—	—	1580	1345	1135	965	810	—
120V coupé	336	3/74	1171	86	17.7	39.0	4	3085*	2460	2100	1785	1510	1275	—	—	—
Violet 140J	RI 132M	1975	1428	94	15.5	32.0	4	3015	2570	2080	1765	1485	1230	—	—	—
Bluebird 180B	316	8/73	1770	104	12.3	27.0	5	—	—	2115	1800	1515	1270	1065	880	—
Fiat 126	334/R1 138	2/74	594	82	60.0	48.5	1	1755	1505	1290	1005	860	725	615	—	—
127 3-dr Special	RI 137M	1975	903	82	18.4	41.75	2	2530*	1935*	1785*	1400	1180*	—	—	—	—
128 4-dr	320	9/73	1116	86	15.5	34.0	3	—	1975	1680*	1430	1205	1010	850	700	—
131 1600S	369	6/75	1585	94	13.6	32.0	5	3240	3000*	2340*	1975	1655	—	—	—	—
132 1800GLS	360	1/75	1756	102	12.0	25.0	6	—	—	—	1925	1565	1420*	1000	—	—
Ford Fiesta 1000HC	417	4/77	957	83	18.4	41.0	1	2325	2145	1945	—	—	—	—	—	—
Escort 1100 Popular	RI 136M	1975	1097	77	23.6	35.0	1	2195	2045	1765	1515	1305	—	—	—	—
Escort 1300XL 4-dr	292	11/72	1297	88	16.0	31.0	2	2985	2725	2350	2025	1735*	1290	1100	935	—
Cortina Mk3 1600XL 4-dr	323	10/73	1593	95	15.1	27.0	3	—	—	—	1960	1665	1415	1200	1005	—
Cortina 2000E estate	347/R1 116	1974	1993	99	12.3	27.5	5	—	—	—	2495	2120	—	—	—	—
Cortina Mk4 1600	404	12/76	1593	89	15.3	27.0	3	3110	2795	2420	—	—	—	—	—	—
Capri Mk2 1600GT	342	6/74	1593	102	12.4	27.5	5	4000	3595*	2955	2545	2200	1895	—	—	—
Capri 3000 Ghia auto	RI 114	1974	2994	113	9.9	22.0	6/7	—	5010*	4160	3535	2990	2505	—	—	—
Granada 3000GXL auto	282	6/72	2994	108	11.7	21.0	6	7725	6485*	4010	3245*	2155	1635	1215	820	—
Honda Civic 1200 3-dr	362	3/75	1169	86	14.7	34.75	4	2640	2255	2015*	1640	1390	1170	—	—	—
Accord auto	420	5/77	1600	89	14.7	32.0	5/6	4010	3420	2895	—	—	—	—	—	—
Jag/Ro/Tri Jaguar XJ6 4.2	227	10/70	4235	117	10.0	16.75	6/7	—	9360	7205	5470	4410	3320*	2230	1885	—
Jaguar XJ12 (L) auto	305	4/73	5343	136	7.6	13.0	7	—	9505	7725	6215*	4110	3295	2105	—	—
Rover 2200SC	324	11/73	2205	104	12.2	24.0	4	—	—	3470	2850	2330	1935	—	—	—
Rover 3500 auto	330	2/74	3528	112	11.1	20.5	5	—	—	—	3320	2725	2205	1735	1390	—
Rover 3500SDI manl	428	10/77	3528	119	10.4	24.5	6	6685	5670	4730	3965	—	—	—	—	—
Range Rover	252	7/71	3528	101	13.2	18.0	5	11140	9905	8515	7600	6340	5275	4410	3615	—
Triumph Toledo 4-dr (Dolomite)	345/R1 150	1977	1296	83	19.8	33.0	2/3	3020	2615	2220	1880*	1435	1220	1035	880	—
Triumph Dolomite 1850	288	9/72	1854	100	11.4	28.25	4	4085	3295	2800	2455*	1910	1585	1315	1065	—
Triumph 2000 Mk2	219	6/70	1998	95	15.0	26.0	4	—	—	3070	2550	2230*	1610	1315	1090	—
Triumph 2500TC	RI 112	1974	2458	101	11.5	27.0	5	—	—	3195	2625	2255*	1735	—	—	—
Triumph Spitfire 1500	376	2/76	1493	97	12.5	35.25	5	3140	2745	2380	1985	1665	—	—	—	—
Triumph Stag	273	3/72	2997	118	10.2	22.5	S/R	—	—	5125	4185	3420	2750	2205	1735	—
Triumph TR7	401	11/76	1998	108	10.2	28.75	6	—	3470	2750	2280	—	—	—	—	—
Lada 1200	355	9/74	1198	91	15.0	33.25	3	1940	1650	1400	1180	985	815	—	—	—
Lancia Beta 2000	RI 171	1978	1995	107	11.2	26.5	6/7	4035	3370	2800	—	—	—	—	—	—
Mazda 1000 2-dr	343	6/74	985	78	20.0	33.5	3	—	—	1465	1245	1055	890	—	—	—
1300 hatchback	424/D4/78	7/78	1272	89	15.9	36.5	4	2670	2295	1960	—	—	—	—	—	—
Mercedes 280E auto	D/79	7/9	2748	120	9.4	21.0	7	—	11635	9655*	5990	4955	4060	3345	2700	—
Opel Kadett S estate 3-dr	338	5/74	1196	84	16.7	32.0	4	3005	2585	2400*	1890	1605	—	—	—	—
Ascona 1.9SR	302	3/73	1897	96	12.3	25.5	6	4000	3695*	2925*	2460*	1825	1495	1230	—	—
Rekord 4-dr	287	3/72	1897	101	12.0	26.0	4	—	—	2525	2130*	1760	1440	1190	995	—
Peugeot 104 4-dr	325	11/73	954	84	17.3	36.5	3	2480	2140	1815*	1545	1320	1130	980	—	—
304	386	5/76	1290	92	16.7	35.5	3	—	2630	2270*	1895	1580	1315	1100	905	—
504GL	RI 140	1976	1971	99	13.7	27.75	5	4360	3640	3045	2525	2080	1710	—	—	—
504 estate	275	4/72	1971	98.5	13.8	24.5	5	5175	4435	3715	3095	2575	2105	1810	1465	—
Reliant Robin	365	3/75	748	72	19.6	47.0	2	2230	2050	1790	1550*	1205	1075	—	—	—
Scimitar GTE	303	3/73	2994	118	9.1	21.25	7	7230*	6090	5050	4185	3370	2775	2330	1885	—
Renault 4TL	RI 121	1975	845	74	26.4	39.0	1	2280	1985	1665	1400	—	—	—	—	—
5TL	349	8/74	956	85	19.7	42.0	2	2550	2275	1915	1615	1365*	1150	980	—	—
5TS	370	11/75	1289	93	13.3	36.25	4	2975	2620	2215	1900	1610	—	—	—	—
6TL (1100)	364	3/75	1108	82	17.9	37.75	3	2670	2345	1985	1665	1400	1170	—	—	—
12L	385	5/76	1289	8												



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